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2025'S MOST WANTED

Brutal new RS6

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+

AMG's 1000bhp Taycan rival

Can the first engine-less AMG get the brand back on track?

+

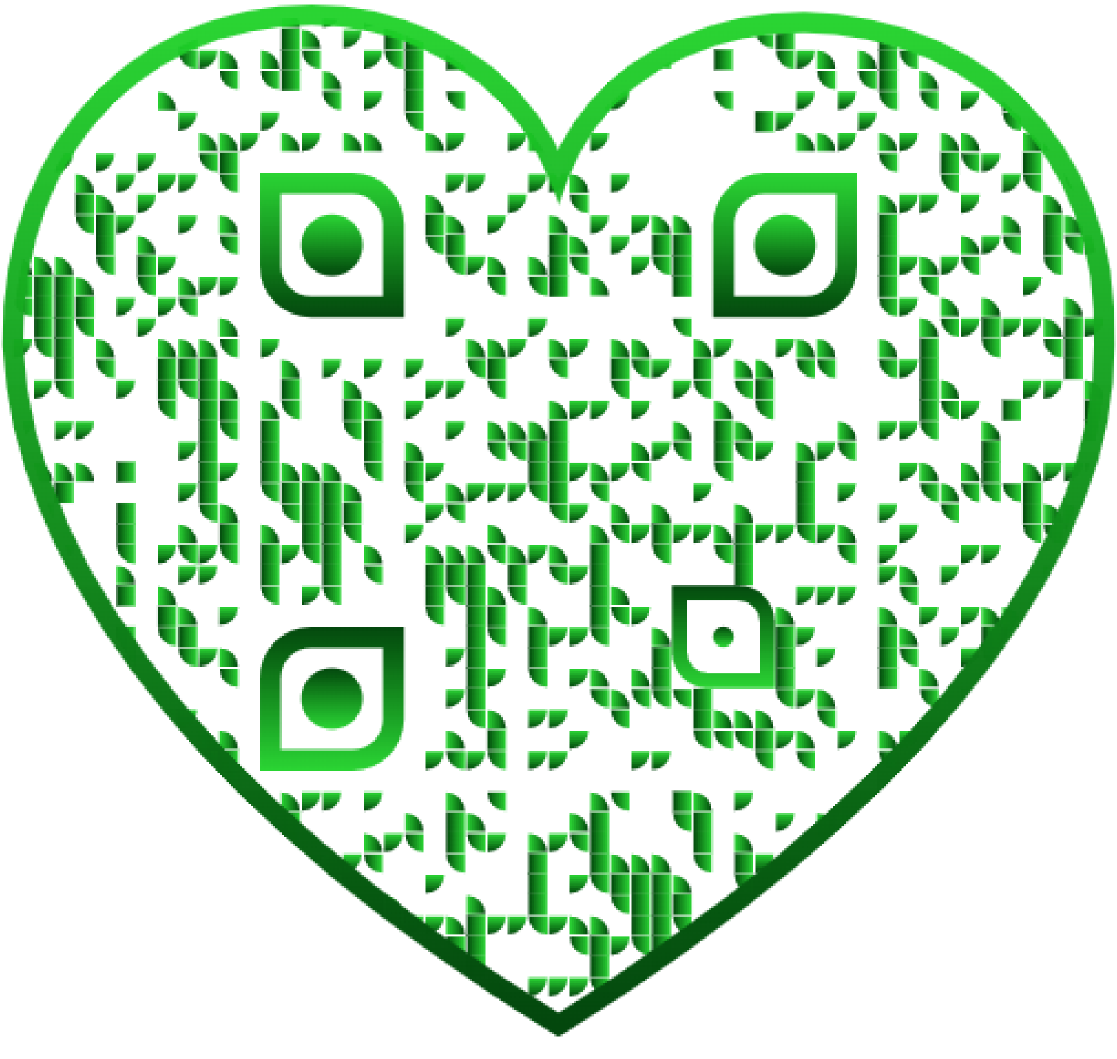
The electric Ferrari is coming

The boss says it's a bit special – and it'll have to be

+

Think you know Aston Martin?

1064bhp mid-engined Valhalla will make you think again



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Welcome

Like ancient Rome, there is no one dream that is Renault

In the '90s, Renault for me meant three things: the 5 GT Turbo on the road, banshee V10 engines in the back of Nigel Mansell's Williams in F1 and the Espace F1. But for one of my friends at school it meant her family's delectably geometric and savagely slow Savanna. And for one of my university lecturers it was his frog-eyed Twingo. It's tempting to ask that the real Renault please stand up. But the truth is there's never been one dream that is Renault.

But Renault right now is looking dreamier than it has in a while. You may be an Apple user. If so, you might be a paid-up News+ subscriber. And if you are, you might follow *CAR*. And if all of the above is true, you may have seen some of our bespoke News+ output, including an all-encompassing ranking of every electric car on sale. We did it for the first time a year or so ago and it proved so popular it's back, stuffed with new entries and with a new number one: the new battery-electric Renault 5.

There wasn't even much of a discussion. In it went, at the top of the pile. Undiluted concept-car looks, perky dynamics and a price we can all get behind/hope to afford – it's a four-wheeled home run in yellow pop! (their punctuation, not mine).

Truth is, you need to be on a bit of a run of form to decide that a) your paint names are going to wear exclamation marks and b) actually building and selling a concept car is a totally valid use of your limited time and money. Wait, you didn't hear? The 5 Turbo 3E, coyly shown as a concept a couple of years ago, has now been green-lit for limited production – as much, you sense, to reward Renault's people for their fine work on the mainstream 4 and 5 as anything.

The thing is so completely and utterly right that suddenly nothing feels out of reach for Renault. Six-figure price tags and endless Porsche analogies from Group CEO Luca de Meo? Fine.

A few months ago we'd have chuckled, bought the man a strong coffee and asked with no little concern if he wasn't perhaps overworked and under-rested. Now it all, somehow, makes sense.

New Jaguar reckons buyers will be so hopelessly in love its cars that the fact they're battery-electric simply won't matter. I'm not so sure. Plenty of indicators, from slumping luxury EV sales in China to the Lotus range-extender-hybrid U-turn would suggest an engine of some sort might be the way to go, at least until the end of this decade. However, the 5 Turbo 3E could use several twisted elastic bands for motive power and I'd still be sold.

(Side note: interesting that the 5 3E isn't badged Alpine, though of course the source material was very definitely a Renault. And who can blame them for making it a celebration of Renault, just as the halo 33 Stradale is an Alfa party on wheels? F1's vast reach may be capable of marketing miracles but it's yet to help Alpine mean anything to the mainstream.)

Can we get our heads around a Renault that builds six-figure, 'mid-engined' EVs as well as the totally ordinary Arkana? Of course we can. That's the only Renault we've ever known.

Enjoy the issue.

Ben Miller
Editor

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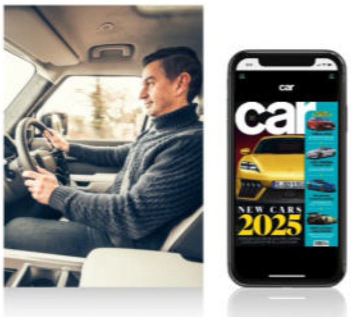

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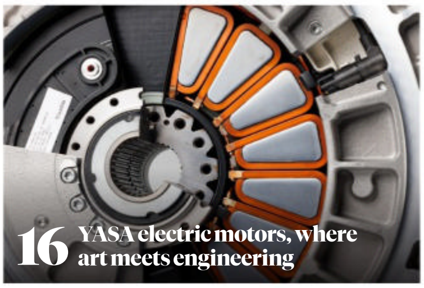

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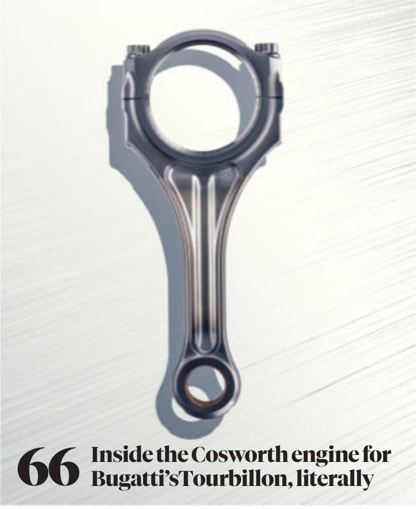

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Eletre will still be electrified, but with hybrid power

TECHNOLOGY

Lotus is U-turning back to engines. Here's why

Nick Gibbs Analyst

▶ **In the 'risks' section of the Lotus** share prospectus published in October 2023 lurks this warning to potential investors: 'If the market for luxury electric vehicles does not develop as we expect… our business, prospects, financial condition, and operating results will be affected.'

A little more than a year later, the risk has materialised alarmingly quickly and the luxury EV business is on its knees. Even in Lotus's new home of China – in many ways the centre of the EV world – sales of high-end electric cars fell 50 per cent in 2024, CEO Feng Qingfeng admitted to investors on the company's third-quarter earnings call.

That has whacked Lotus right in its growth trajectory. The Eletre SUV and then the Emeya saloon were supposed to be catnip to a luxury-loving populace more focused on coping with traffic jams than maximising cornering g-forces. But Lotus sales actually dropped six per cent in China in the first nine months of the year, shrinking below European sales figures.

To add insult to injury, Lotus's key target market of the US slapped a 100 per cent tariff on Chinese imports, elevating the Eletre into the Lamborghini Urus or Bentley Bentayga price bracket. Europe's increased tariffs of 29 per cent, up from 10 per cent, aren't as bad but still hurt.

Lotus's reaction to discovering luxury customers are now declaring themselves too posh to plug in is to say well, fine, we are not too proud to pivot.

The brand announced in November it would rip up its plan to go all-electric by 2028 and instead would launch 'Hyper Hybrid' models from 2026 that add a turbocharged combustion engine as a range extender.

'If we went with our original plans, it wouldn't suit every market globally, especially with the tariffs,' Dan Balmer, the new CEO of Lotus Europe, told *CAR*. Handily the EU doesn't include hybrids of any sort in its new China EV tariffs.

The new technology can be incorporated into the Electric Premium Architecture underpinning the Eletre and Emeya, giving them a range of almost 700 miles. Meanwhile the Type 134 – the planned smaller SUV, a rival for the Porsche Macan Electric that had been scheduled for a 2025 reveal – has been put on hold. 'We're taking the chance to look at the market again and read the room,' Balmer said.

Lotus will also delay its electric sports car, Type 135, and extend the life of the combustion-engined Emira.

Unmoved by the lure of lower running costs or purchase incentives, the rich are currently seeing very little advantage in switching to electric. 'Luxury car engines are already very powerful, and the driving experience is quite similar, with eight-cylinder and 12-cylinder engines performing well,' Feng admitted in an interview with the *Wall Street Journal* conducted at the Guangzhou auto show in November.

The Hyper Hybrid is the answer, Lotus hopes. EREVs, or extended-range electric vehicles, have become big business at the premium end of the market in China. Li Auto's blandly attractive SUVs with their big batteries mated to a back-up 1.5-litre engine have eaten into the market share of BMW, Mercedes and JLR.

The problem for a manufacturer of luxury cars is that once the battery is depleted the four-cylinder engine is sweating hard to power a generator to keep the electric motor fed. Lotus's solution is Dual Hyper Charging technology. Once the battery runs low mid-journey, the company's 'ultra-fast' On-The-Drive Charging technology will provide a rapid top-up, theoretically retaining the same smooth, powerful electric experience for longer.

'It will satisfy Lotus users' pursuit of driving joy,' Feng told analysts.

When the car stops, 'flash-charging' (by which Lotus simply means a quick visit to a plug-in charger) can top the battery up from 10 per cent to 80 per cent full in 10 minutes, according to the company. This is 'similar to a battery swap', Lotus says in reference to technology employed by Nio, another premium EV company fiercely competing for share among the plug-shy rich.

All this is enabled by a 900-volt electric architecture, upgraded from the 800-volt system in the electric-only Eletre and Emeya, two cars that already charge as fast as anything on the market at speeds of up to 340kW.

But what about the engine? The Hyper Hybrid won't use the AMG four-cylinder unit currently available in the Emira, Balmer said, without saying what it will employ. It's likely the engine will come from Horse, parent company Geely's new hybrid-focused engine business formed with Renault.

Lotus also wants to sell Hyper Hybrid tech to outside car makers, once it has given itself a head start, Feng said.

Lotus's precision U-turn is arguably only possible due ▶

Range-extender engines will give the Eletre and Emeya a range of almost 700 miles

Luxurious and techy needn't mean EV-only

Emira was meant to be the last petrol Lotus

to its relationship to Geely. The Chinese behemoth is busy recalibrating other formerly electric-only brands to react to its country's new embrace of the plug-in hybrid in its various forms, including its Audi rival Zeekr and Smart, a 50/50 joint venture with Mercedes.

Despite falling short of its self-imposed targets, Lotus is in fact growing: 7617 sales in the first nine months of 2024, up 136 per cent from same period in the year before. For a company that has traditionally regarded anything over 2500 sales in a year as cause for celebration, these are clearly very different times, albeit unprofitable.

The business has been structured around the expectation of much higher sales, so sales figures that would until recently have been impressive are underwhelming. The share prospectus spoke of 47,000 sales in 2024 on the way to 150,000 by 2028. Even the heavily revised figure of 12,000 for 2024 was 'definitely challenging', said Feng.

The bullish initial figures were 'predicated off near-linear adoption in all markets', Balmer said. 'We've now recognised that it's more of a market-share objective.'

Lotus, like many other car companies, is having to throttle back production, at both its Wuhan facility and Hethel, as it works through unsold inventory. The company even had to let 200 staff go at its Norfolk sports-car facility due to weakened demand for the Emira, which accounted for just under half of sales in the first nine months of 2024. Balmer blamed weakened Emira demand on the 'normal lifecycle' of a three-year-old car. Meanwhile the first £2m Evija electric hypercars will be delivered in the second quarter of 2025, six years after the car's unveiling.

The world has changed immeasurably since Geely bought 51 per cent of Lotus from Malaysia's Proton in 2017. In that time Geely has delivered on most of the promises it has made for Lotus, including building the new factory in Wuhan for the 'lifestyle' vehicles.

The cars, too, have largely lived up to their promise, amid what's arguably been an even more challenging brand renewal than Jaguar's.

As late as 2022 the company was still lauding its 'sensible decision' to swing for all-EV by 2028. But a combination of government-level anti-China sentiment and a huge swing away from EVs among the super rich after initially embracing them has left Lotus with little choice but to activate Reinvention 2.0 and welcome back the combustion engine.

The world has changed immeasurably since Geely bought Lotus in 2017

Emira sales are slow, adding to the pain

MOTORSPORT

America loves F1. Finally, it'll be in it

Edd Straw F1 writer

▶ **General Motors is the latest** major manufacturer to join Formula 1, but it's been a tortuous journey. There are still twists and turns to be navigated before the 'agreement in principle' translates into the Cadillac-branded operation becoming F1's first all-new team in a decade in 2026. But given the door has previously been slammed shut on an eleventh team, this is a seismic shift.

So, what's changed? Given the byzantine nature of the process, the answer is both a lot, and very little. The team applied for an entry when the application process was opened by FIA president Mohammed Ben Sulayem in January 2023, a decision against the wishes of F1 commercial rights holder Liberty Media, concerned about the financial implications of adding an eleventh team. The FIA approved the entry under the 'Andretti Formula Racing' name in September 2023, but F1 rejected it for reasons including the claim it wouldn't be competitive or add value.

The name change is significant. The project was created Andretti Global, headed by Michael Andretti, one of Indycar racing's most successful drivers/team bosses and the son of 1978 F1 world champion Mario. It brought General Motors, using its Cadillac brand, on board to bolster its candidacy, but it wasn't until Andretti moved into a purely advisory role that the entry was approved. When it was, there was no mention of Andretti, with F1 referring to it as GM/Cadillac.

Despite the identity change, this is exactly the same outfit now presented as a GM team run by a company called TWG, headed by CEO Dan Towriss. TWG owns Andretti Global, which will design, build and race the cars, with Ferrari engines and gearboxes. GM is now in control, but it's a joint venture even though the only obvious Andretti connection is Mario's place on the board. GM has referred to the entry as Cadillac Formula 1.

There's now the small matter of finalising the fee GM must pay to enter, which will rise from the current $200 million to a potential $450m or perhaps even more. This is an anti-dilution fee, shared between the existing 10 teams to offset the impact of F1's prize fund being split 11 ways rather than 10. The position of the teams is summed up by Red Bull team principal Christian Horner: 'We'd have absolutely no problem with seeing GM coming in, but we're not paying for it.'

Politics and finance aside, GM has a mountain to climb if its team is to be competitive. What should help is the decision by Andretti to press on with building up its staff and facilities despite the uncertainty. It banked – correctly – on F1 relenting after a US Department of Justice anti-trust investigation opened in August; that probe has now been parked.

GM/Cadillac has recruited shrewdly, appointing F1 veterans to key posts. Graeme Lowdon, sporting director of the Virgin team that raced in F1 under several names from 2010-2015, is team principal. It has also brought in three of the key players in the Benetton/Renault F1 team's championship successes. GM has 280 people working full time, mainly on design and development in its Silverstone facility. That number will swell over the next year.

GM has achieved what once seemed impossible by getting on the grid. Now the hard work really begins.

'78 F1 champ Mario Andretti is on the board for the new General Motors/ Cadillac F1 team

NEW CARS

Aston's Valhalla has taken forever. Worth the wait?

Piers Ward Deputy editor

ASTON MARTIN
VALHALLA

More Daniel Craig than Roger Moore, for sure

Marginally more real-world than the other mid-engined Aston, the Valkyrie

▶ **In an era when Chinese** car manufacturers crank out all-new EVs in record time, the Aston Martin Valhalla has had a very long gestation. It's been well over 2000 days since the concept AM-RB 003 was unveiled at the Geneva motor show (remember that?), back when Theresa May was still in power. Never mind the four changes of Prime Minister since then – Aston Martin has had four CEOs and two owners.

Even by its own volatile standards, Aston's last five years have been a wild ride – but somehow the Valhalla's hung on in there, refusing to let go of the edge and drop quietly into oblivion. It was originally revealed to the world in 2019 as a concept by Andy Palmer, together with a Vanquish designed to go up against the Huracan and Ferrari F8 (remember them?). Both cars were set to use a hybrid-boosted V6 powertrain. Valhalla's second coming came in 2021. Palmer was gone, replaced by ex-AMG man Tobias Moers, and the V6 was gone, too, replaced by a more sensible (the price dropped a handy £300k) V8. And now, well into the Lawrence Stroll era, Valhalla is finally a production-ready car – a big-money plug-in hybrid comparable with Lambo's Revuelto on power but twice as expensive. Think of it instead as a cut-price Ferrari F80 or McLaren W1, then. It's arguably prettier than both.

Originally dubbed 'son of Valkyrie', there are links to the Adrian Newey-penned (then a Red Bull man, now set to join Aston F1 in early 2025) hypercar. Simon Newton, Aston's director of vehicle performance: 'We set a precedent with the Valkyrie but it is an extreme car. We wanted some of its precision here, blended with more usability.'

The Valhalla's remit extends beyond the racetrack to include (hopefully epic) roads. It needed a much wider breadth of capability than the Valkyrie – one of the biggest engineering challenges for the car.

The numbers include 1064bhp, 811lb ft and a peak downforce figure of 600kg – not exactly fluffy. It's the brand's first plug-in hybrid and its first use of a new flat-plane-crank V8. The 4.0-litre unit runs a low-inertia twin-turbo set-up to give a full 817bhp, enhanced by three electric motors: two on the front axle, handy for torque ▶

Big paddles; big numbers if you get really stuck in

vectoring and regen, and one housed within the new eight-speed dual-clutch 'box at the rear. All are capable of both charging and drawing power from the 6kWh battery, which can handle eight miles of EV-only running.

The V8 is, according to Aston, not a crate motor – it doesn't go down the same production line as other engines at AMG, and it gets bespoke parts that don't appear in any Mercedes. It's Aston Martin's equivalent of the V12s Merc supplies to Pagani.

There are no lightweight axial-flux e-motors as used by Lamborghini and Ferrari here. Instead, Aston chose more traditional radial motors, despite the purveyor of those axial motors, YASA, now being owned by Aston's 10 per cent shareholder Mercedes-Benz.

To an outsider, that looks like a rare missed trick, especially when you consider all the trouble Aston Martin has gone to in making the Valhalla such a focused car. For instance, it's claimed the aero borrow plenty of learnings from the F1 team and include a hydraulically actuated rear wing that can rise 255mm in under half a second.

Balancing it at the front is an active wing – concealed from view, in keeping with the overall clean look. Minimising the number of ducts and flourishes interrupting the smooth lines is a deliberate policy by chief creative officer Marek Reichman, who has used elements such as the doors to hide external scoops and intakes. Dubbed 'door turning vanes' (clearly none of the car's long gestation period was spent coming up with snappy names), these direct airflow from the front wheelarch and into the radiators, using the inner surface of the door outer to serve as the duct.

It's claimed the aero uses learnings drawn from the F1 team, including a hydraulically actuated rear wing

The car gets a concave floor in order to generate a low-pressure area, and the rear wing can operate in multiple planes depending on what's needed at any given moment; drag reduction or downforce. It can also function as an airbrake when the car is in Race mode. Aston claims the peak 600kg of downforce is consistent from 150mph to the car's top speed of 217mph as the system automatically adjusts all the aero depending on the requirements.

The Valhalla has a carbon tub with aluminium subframes front and rear, helping to keep the dry weight to a respectable 1655kg (if all the optional lightweight elements are fitted, including magnesium wheels, saving 12kg, and even titanium wheel bolts. You can also specify exposed carbonfibre body panels; removing the paint saves a further 3kg).

Tapping into Aston Martin's Formula 1 expertise, carbonfibre features extensively – not only the bodywork but also interior components including the steering wheel

and the single-piece seats. Further light-weighting has been achieved with clever production processes, such as the simplified design for the front clamshell. Back in Valhalla version one days, it was made of a mix of aluminium and carbonfibre – now, by crafting it from just two pieces of carbonfibre, it saves 7kg.

Double-wishbone pushrod front suspension, with inboard springs and dampers, is coupled with a multi-link rear set-up. They're Bilstein single-valve adjustable dampers, not the double-valve set-up popular with Porsche. Newton explains: 'Twin-valve is good for surface isolation and ride comfort, but if you want response and control, the DTX system we have is preferable.'

Don't take that as a confession from Newton that the Valhalla's responsiveness is at the expense of the driver's wellbeing. On the contrary, he insists it's surprisingly comfortable: 'It rides well and breathes with the road.'

Comfort is one of the traditional Aston Martin characteristics that needed to be baked into a package that is in so many ways out of keeping with the company's heritage. It's been demanding, but Newton is convinced his team have succeeded in rising to the challenge of building a mid-engined supercar worthy of the badge.

'It wasn't the top priority to be so well-riding – it had to be class-leading on track and still feel like an Aston in terms of its ride.'

Crucially, the dampers operate in conjunction with the other systems – chiefly the aerodynamics and the powertrain – so the car 'always looks to keep a nice, flat attitude', according to Newton. That's vital if the aero is to be kept working in the correct window.

With a limited run of 999 cars, each costing about £850,000, this – finally – is the car to link the rest of the roadgoing Aston line-up with the endurance racers and the hugely ambitious Formula 1 programme. The Valhalla also retains some of Valkyrie's purity and intensity – not words traditionally associated with Aston. If it can do so while retaining a dash of the brand's trademark charisma and comfort, it'll have been well worth the wait.

Nope. We can't find a bad angle

ASTON MARTIN

CHINA

Stella Li doesn’t care if you snigger at BYD badges

Jake Groves Deputy news editor

▶ **BYD is on a roll in Europe**. The brand is expanding fast, with new models arriving like the electric Sealion 7 as well as a plug-in hybrid version of the popular Seal.

But it’s also facing growing pains. Like other Chinese car makers expanding in Europe, it’s becoming subject to tariffs in the region as the EU Commission intervenes with ‘anti-subsidy’ legislation.

Stella Li, BYD’s head of European operations, is right at the centre of the brand’s growth. She has said these additional tariffs are ‘unfair’, telling Reuters that politicians should ‘stay away’ from them as it is only adding more cost to auto manufacturing and ‘confusing’ the industry.

But she has a plan. ‘We’re the global number one for new-energy cars. Our global market share for NEV [new energy vehicles] is 23 per cent, which is an amazing number,’ Li tells us. For reference, that ‘new energy’ term includes hybrids, plug-in hybrid models and battery-electric cars, as well as those running on hydrogen fuel cells.

‘In the end, the industry will wash out the true competitors,’ Li adds. ‘You need a company that not only has the technology but the financial stability, manufacturing capacity and a real business plan for the future.’ As well as BYD’s enormous manufacturing capacity in its home country, it has plans to make cars in Europe, having already announced a new plant in Szeged, Hungary. A deal has also been made with the Turkish government.

Despite the political battles, Li says it is ‘so satisfying’ to see BYD models on the roads in Europe, adding that buyers in the region ‘are the best’. But Li also acknowledges that BYD is still in the brand-building phase with consumers. ‘They’re a little conservative, and they need time to understand you but that’s just a timing measure. Once they build that trust with us, we should be okay.’

A key differentiator for BYD is its unconventional badges; Seal, Dolphin and Sealion can raise eyebrows. Is it deliberate? ‘Yeah, maybe when people talk about BYD, the name might not be sexy but at least they’re talking about us!’ smiles Li. ‘I’m joking, of course, but the more you enjoy the car itself, you almost ignore the name.

‘And with models like the Seal and new Sealion, we’re looking to people who are interested in nature – we’re saying that these cars are designed to be a part of nature and not damaging it. So that is where these names are good – it may be strange to the rest of the car industry, but it’s unique for us.’

BYD also has a luxury sub-brand, Yangwang. Its U9 supercar features advanced suspension that can keep the car level even if it’s driving on three wheels, while the monstrous U8 SUV can do tank turns.

‘People are believing what we say when we talk about a technology-defined future,’ Li says. Will that include solid-state batteries? ‘Going from the lab to being commercially available is a long way – you need a lot of verifications. Secondly, you need to think about manufacturing capacity and cost competitiveness of the technology.’ At the moment, it’s still some way off. But as BYD continues to go from success to success, mock at your peril.

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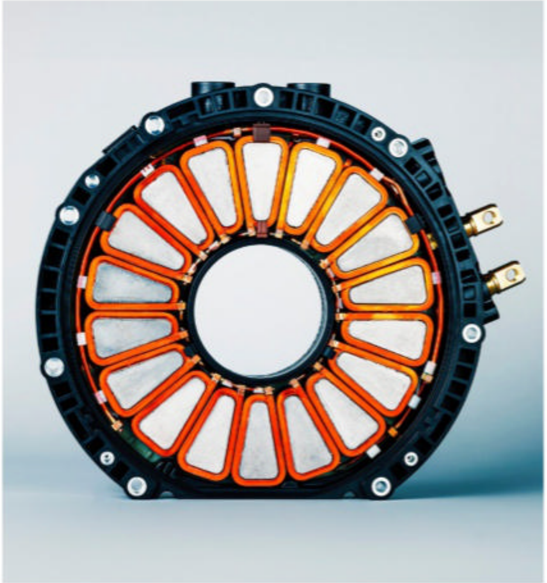
INNOVATION

Meet the V12 of electric motors, here to make hybrids fun

Ben Oliver Contributing editor

Lamborghini is happy to put its name on YASA motors

It looks right because it is right



LAMBORGHINI
YASA
FAE
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▶ **If you worry that Britain** no longer produces brilliant engineers of the Frank Whittle variety, meet Dr Tim Woolmer, and YASA. Lamborghini has just announced that the new Temerario will use YASA's brilliant, tiny, lightweight electric motors in its hybrid drivetrain. But the impact of what Woolmer is creating might go far beyond high-priced supercars.

For more than 200 years we've known that there are two basic types of electric motor. There's the radial-flux, which is cheap and easy to produce and which powers everything from your Tamiya to your Tesla. It looks a bit like a sausage roll: the magnetic flux flows radially around the stator (the pastry), acting on the permanent magnets in the rotor (the sausage), causing it to turn.

In 1821, Michael Faraday demonstrated the first example of the other kind of e-motor: the axial-flux or 'pancake' design. Here the stator and rotor are both discs, sitting next to each other with the shaft passing through the middle. The current flows through the stator axially, or in line with the shaft, acting on the permanent magnets in the disc-shaped rotor alongside it, causing it to turn.

The advantages of this design are legion. Because there's more surface area for magnetic interaction and most of it is generated with greater leverage at the edges of the discs, an axial-flux motor can produce much higher torque for a given weight. Because the hot bits aren't buried in the pastry, it can be cooled more easily and can operate at a higher percentage of its peak output for longer. And that pancake shape has obvious packaging advantages: it can be slipped between the engine and gearbox in a hybrid, or even into the wheels of a pure EV.

But, before Woolmer, nobody could work out how to mass-produce an axial-flux motor. His solutions include getting rid of the heavy iron 'yoke' which previously held the stator's copper coils, reducing weight and bulk, and allowing a rotor to be placed on either side; an oil-cooling system for the copper coils through which the current flows; and the rather beautiful, jewellery-like design of those coils, which are edge-wound from flat copper wire around cores of soft magnetic composite and sit in the ▶

Temerario joins an elite band of YASA-aided supercars

stator like the segments of an orange. The firm he founded to put his ideas into production – YASA – sounds exotic, but stands for 'yokeless and segmented armature'.

This was back in 2005. As the market has grown, Woolmer's designs have increased in power and shrunk. Look at the YASA and Tesla motors on his desk and axial's advantages are immediately obvious: YASA's current design is around a quarter the depth of the Tesla motor, half the weight, and makes twice the torque. It's also a far neater, better-resolved design than the Tesla: a classic example of something looking right because it is right.

It's still expensive, though. YASA first supplied prototype, racing or very low-volume road cars such as the Jaguar C-X75 and Koenigsegg Regera. In 2019 the Ferrari SF90 became first series-production car to get a YASA motor, followed by the 296 GTB. The Lamborghini Revuelto hybrid uses two on the front axle to assist its V12, and the Temerario adds a third on the rear axle. Lambo's forthcoming full EVs will be entirely YASA powered.

The biggest beneficiary of Woolmer's tech is likely to be Mercedes, which bought the company (excluding Evolito, his aerospace division) in 2021. YASA now employs 500 people in the UK, and will continue to supply the supercar makers from a plant near Oxford which, after a £12m investment, can now make 25,000 motors a year. But Mercedes will start building them in the hundreds of thousands for its AMG.EA platform at a new Berlin plant.

Axial-flux motors might give a new generation of all-electric AMGs the engineering distinctiveness which we all feared might be lost in performance cars in the EV age. Other than the packaging flexibility, the compounding effect of mass reduction means the 100kg saved by the motors themselves is at least matched by what can then be saved elsewhere in the car: in the battery especially.

As the market has grown, Woolmer's designs have increased in power and shrunk in size

YASA is developing motors of around 300bhp that weigh just 7kg. That's less than a conventional brake disc. Put that motor in the wheel – as the Mercedes Vision One-Eleven concept did in 2023 – and there's no increase in unsprung mass, so no effect on the ride or handling of the car. But the weight savings really start to multiply: no driveshafts, possibly no gearbox, and if the law is changed, no conventional friction brakes either.

Axial-flux motors are likely to remain relatively costly and lower-volume, and their most dramatic impact might not be in automotive at all. Aerospace companies will pay way more to cut weight than car makers and the compounding effects of weight loss are greater. Affordable, short-hop electric flight starts to look achievable. If that happens, the comparisons between Woolmer and Frank Whittle might be more than academic.

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5 Turbo 3E: improbably, a production car

BEYOND CAR OF THE YEAR

Renault's plan: be more Porsche

Vicky Parrott Industry expert

You think the new electric Renault 5 is pretty special? Meet the 500bhp Renault 5 Turbo 3E. It's part of a confident new phase for Renault – the brand and the group – as it builds on recent successes and aims even higher.

The 5 Turbo 3E is a production car that Renault calls a 'reinterpretation' of the original 1980 Renault 5 Turbo and the later Turbo 2. It follows on from 2022's Turbo 3E concept, which celebrated the 40th anniversary of the original Turbo 2 with a caricature of the Turbo style cues, wrapped around a 42kWh battery and powertrain set up for huge performance and drifting ability.

While the Pikes Peak-style wing of the concept has gone, this production 5 Turbo 3E keeps plenty of that exaggerated look. Renault will produce 1980 examples, which use a bespoke platform and carbon composite

Key to the continuing evolution of both Renault and Alpine is the advance of battery technology

body, with two in-wheel motors at the rear to propel the car from zero to 62mph in under 3.5 seconds.

'The Turbo 3E hops between inspiration from the original R5 Turbo, and the new Renault 5,' explained Sandeep Bhampra, Renault's chief of advanced design. 'The dimensions are key to the design, too. The body is over two metres wide, so it's supercar width. It also has the performance to back that up; it'll be a drift champion.'

There are plenty of neat details, from the facia that nods to the regular 5, to the vast rear diffuser and air scoops, one of which houses a charging socket. Details of what battery it will use are undisclosed, but it's safe to assume it'll be a mid-sized lithium-ion NMC battery offering the best possible energy density, given that we were told that this will be one of the lightest EVs on the market.

Renault also remains close-lipped on the range, price and on-sale date. Given that various company executives referenced cars like the Audi R8 and Porsche 911 as rivals, we wouldn't be at all surprised if the 5 Turbo 3E comes in at £150,000 or more; a lot for a Renault, not unreasonable for a collector's car like this.

In an ambitious double whammy, the 5 Turbo 3E may go on sale at a similar time to the new Alpina A110 – a very different kind of performance EV, expected in 2026. Renault Group CEO Luca de Meo told *CAR*: 'The A110 will be lighter than a comparable combustion-engine car, and for performance there will be no comparison.'

De Meo went on to explain that Alpine will launch at least one new model each year up until 2030, but that the A110 would have a platform all of its own. Sounds like an expensive way to go about business, especially when Dacia in particular has thrived by re-using Renault hardware. De Meo's thinking big, though: 'We look at Porsche as inspiration. They do the 911 on its own platform and then they share platforms for other models.' That's reflected in the Alpine A290, which uses the Renault 5's underpinnings, and the forthcoming A390 fastback that shares the Renault Scenic's AmpR Medium platform.

What will the A110 will look like? Nobody has seen the final car yet, but we know it will have an evolutionary design and keep the current car's twin round headlights.

It will be important to emphasise the continuity with the current A110, said de Meo. 'Would Porsche make a square 911? No. Great brands nurture their classics. It doesn't have to be about performance cars but it has to be about emotive cars.'

Key to the continuing evolution of both Renault and Alpine is the advance of battery technology. Currently, Renault uses lithium-ion NMC batteries in most of its EVs, with lithium-iron phosphate LFP batteries powering Dacia models and the more affordable versions of the Renault 5. It was announced recently that Renault's battery and EV development company, Ampere, was introducing cell-to-pack and LFP technology from 2026 and would assemble the batteries at Renault's plant in Douai, France.

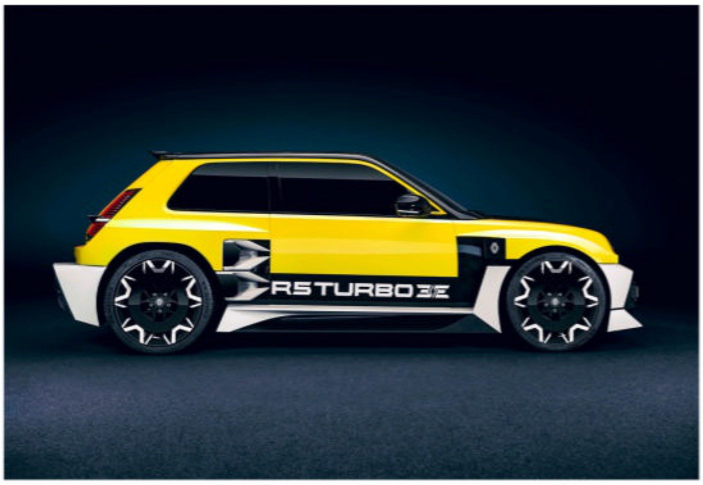
With the widespread use of solid-state technology still several years away, the availability of affordable, compact and light batteries is crucial for all mainstream car manufacturers, as they can make small EVs profitable.

Overall, the Renault Group is in better shape than most to weather the many storms battering the industry, not least thanks to the instant success of the 5. Since it went on sale in France in the last quarter of 2024, Renault's share of the electric car market in its home country has risen from 16.8 to 23.3 per cent. Significant early demand suggests similar levels of success to come in the UK and many other key markets. It's been extremely well received for its bold design and highly rated by road testers – check out our new EV ranking on *CAR*'s Apple News+ channel for confirmation.

De Meo isn't finished with his plans yet; when asked whether Renault was now the innovative brand he wanted it to be, the answer was unambiguous: 'Not yet, no.'

Even so, the Renault Group now has bases covered (or soon to be covered) from the ultra-affordable electric hatchback to the family SUV, the purist sports car and all the way up to the collectable retro-modern supercar. In industry terms, Luca de Meo's 'Renaulution' plan has transformed the French brand; problem child to poster child in just a few years.

De Meo: juggling Renault, Alpine and Dacia



INDUSTRY

Audi's new plan? Nail the normal stuff

Georg Kacher European editor

▶ **Just what is Audi for?** Poor financial figures look like a symptom of an identity crisis at the car maker once renowned for low-key excellence. Sales are down. It's invested heavily in getting new all-electric cars to market at a time when interest in EVs is waning. It's planning to lose engineers as a way to cut costs – but that risks slowing the development of much-needed new cars.

Any company can survive downturns in sales, market share and profitability – and Audi is far from alone among European car makers in finding the going pretty choppy at the moment. But what's more worrying is the suspicion that its commitment to engineering excellence may not be what it once was, and the perception that Audi is no longer clear what it stands for, within the premium car market and within the VW Group.

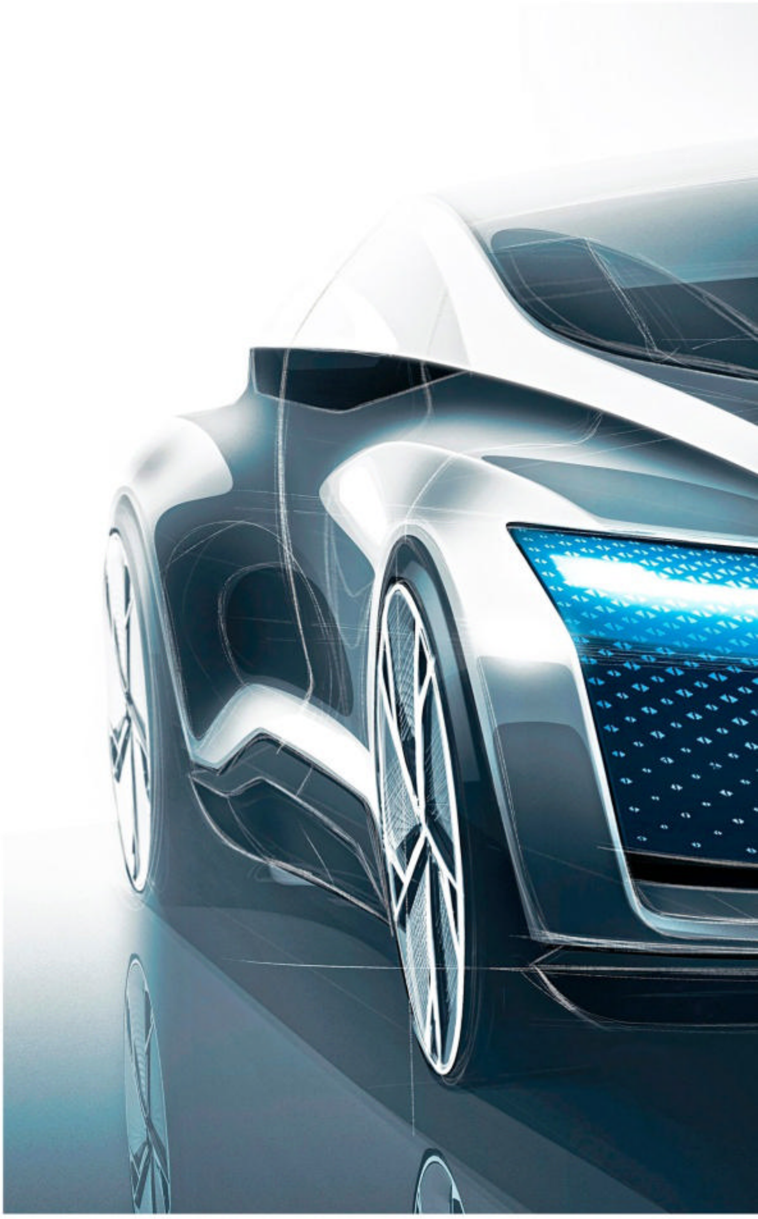
There are reasons to be optimistic. The man in charge at Audi, former Porsche executive Gernot Döllner, who took over from Markus Duesmann in September 2023, has a good working relationship with VW Group boss Oliver Blume. Döllner has, we understand, given a clear brief to Massimo Frascella – who took over from Marc Lichte as chief creative officer in June 2024 – to avoid vague future-gazing and instead create a down-to-earth show car that points to a production vehicle.

Sales are down in Europe, China and the US, and the thousands of jobs at risk include many R&D specialists – the people who should be working on the engineering solutions that will restore some of the shine to Audi's tarnished reputation for quality.

Looking to the near future, Döllner has split development work between seven teams, each focused on a group of related products. For instance, one group's efforts are centred on the MEB and MQB platforms, which between them should provide the next generation of electric and combustion replacements for the A1, Q2, A3 and other modestly sized products. At the other extreme, a different group is tasked with creating the future electric A8.

Insiders expect a new electric Q2 crossover in 2026 and the following year an all-electric A3 replacement (to be badged A2, under Audi's new naming convention, where odd numbers have engines and evens are all electric).

The project referred to internally as C-Sport is what's left of Audi's ambitions for a sports car, a sister of the battery-powered Cayman and Boxster. Stuttgart's future clean-air two-seaters have apparently come in way over budget, and the target retail price is now a stiff €130,000.

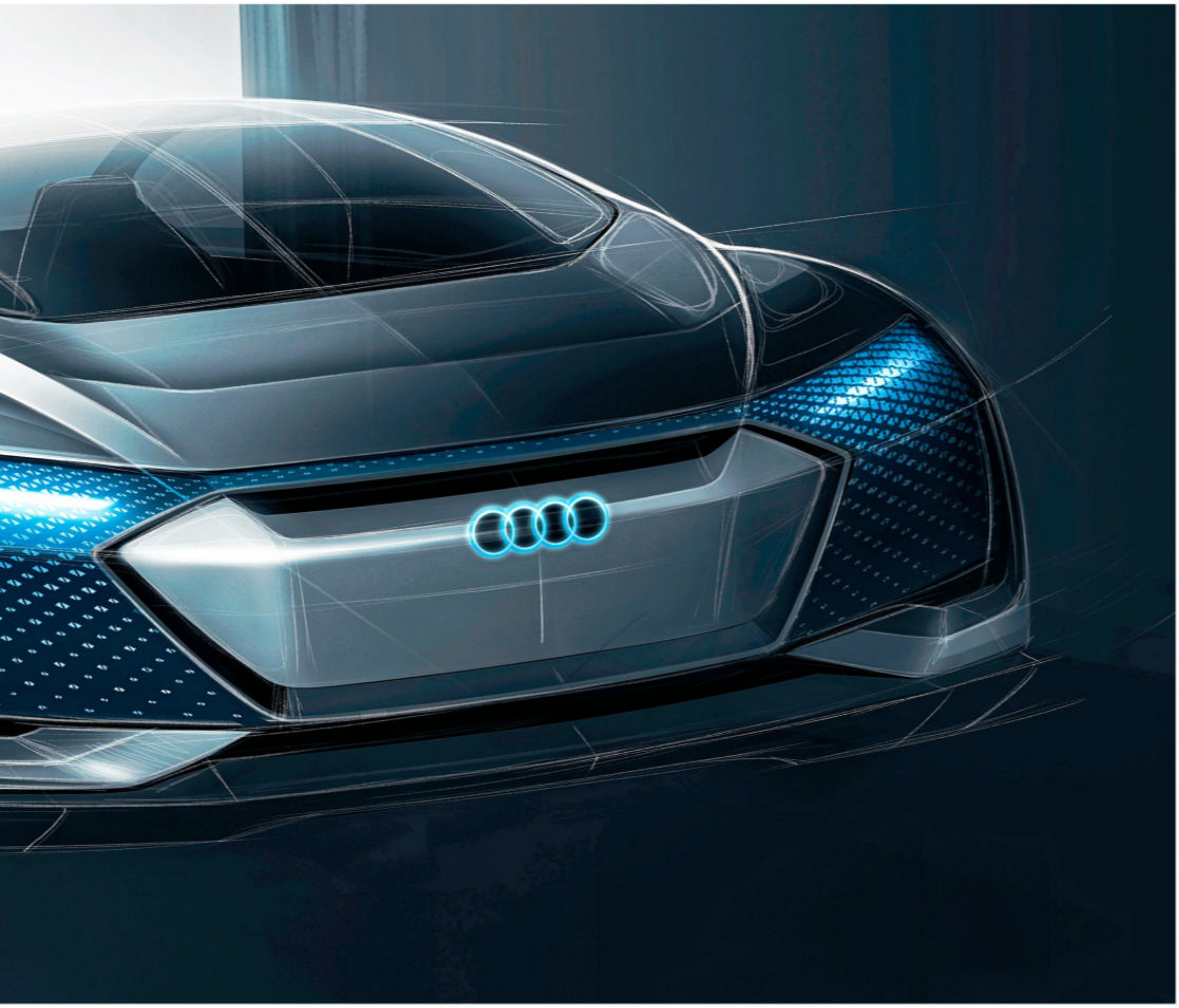


Forget the moon shots, Döllner (far right) has told design chief Frascella

As a result, Audi has not yet confirmed its C-Sport spin-off. Other projected sports cars, including the R8 replacement, have been mothballed, and the next-generation e-Tron GT – to be twinned with 2028's second-generation SSP-based Porsche Taycan –is currently on hold.

Another interesting potential newcomer is project HardQore – the capital Q stands for a new quattro all-wheel-drive system with up to three e-motors, stacked suspension, four-wheel steering and off-road-biased torque vectoring. Co-developed with Magna, the 800-volt HardQore shares its ladder-frame chassis, electronic architecture and key drivetrain elements with the SUV and pick-up from Scout, the heritage workhorse brand revived by VW; a four-cylinder range-extender petrol engine driving the live rear axle will also be on offer.

The South Carolina plant, which has a projected annual capacity of 200,000 units, could in principle also accommodate the still nameless Audi derivative due in 2027 or 2028. It's believed to be a three-row, high-end metal-top priced one or two notches below the Mercedes G-Class and imminent electric Range Rover. But there's a



glitch: like the C-Sport, the HardQore project has not yet had the necessary investment assigned to it.

One of Lichte's most compelling future Audis, designed before his departure, is the RS Allroad, with big wheelarches and a rugged overall look. It will be available as a hybrid, petrol or diesel engines but not EV. That sounds very appealing – and very do-able.

In common with all VW brands except perhaps Bentley and Lamborghini, Audi needs to tighten its belt and concentrate on profitable volume-sellers like 2028's A4 e-Tron, which was Lichte's final effort before Frascella arrived from JLR. Straight-bat cars like that will be prioritised over emotional niche models – no more coupes, no more convertibles or roadsters, no confirmed new sports car. Also due for the chop are the barely profitable A1, the stillborn Q1 and the non-e-Tron Q8.

It will be a shame to see the back of sportier and wilder Audis, if that's the way the belt-tightening strategy manifests itself. But maybe that's exactly what Audi needs right now: to get back to the sort of cars that made its reputation in the first place.

> **Straight-bat cars like the A4 e-Tron will be prioritised over emotional niche models**

First drives

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The 300-mile test

NEW CAR MEETS REAL WORLD

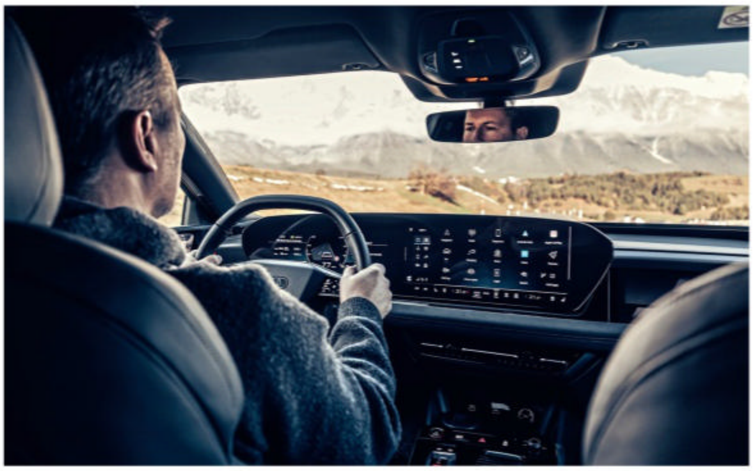
AUDI S6 E-TRON

Rings of fire and ice

Hot but not too hot, posh but not too posh, Audi's electric S6 shows what it can do in the German winter

Words Chris Chilton **Photography** Olgun Kordal

Optional camera mirrors good for aero and noise; not so good for seeing



Neat and familiar, but we still yearn for physical controls

A chill wind is blowing in Germany's car market when we arrive in frosty Munich to grab the keys to Audi's new all-electric S6 e-Tron. Our aeroplane touches down the same day figures land revealing EV sales in the country fell by almost a quarter in November versus the same period a year earlier. Other months in 2024 delivered similarly worrying results for a car maker already too committed to the launch of the electric A6 and S6 to turn back.

But maybe Audi needn't worry, and not just because it'll soon launch a combustion-powered successor to the old A6, this time badged A7. People are still buying EVs – they now account for one in four new cars sold in the UK – and there's a good chance they'll want to buy this one. The A6 e-Tron is built around the same VW PPE platform that's the basis of sister brand Porsche's acclaimed Macan Electric and promises a long range, fast charging and sorted chassis. Audi is the last of the big three German premium car makers to launch a zero-emissions executive car, but on paper it looks like it could be the best of the bunch.

We have an S6 e-Tron Sportback and a couple of days to test that theory, and a Google Maps route that takes us down through the south of Germany, across Austria and to within spitting distance of the Italian border.

The regular non-S version, the A6 e-Tron, is unusual for an Audi in that it's rear-wheel drive in its most basic form, though all-wheel-drive models are also available. That car has a £62,500-£85,300 price range and power outputs that stretch from 322 to 456bhp.

Those prices sound punchy to me, but they're broadly in line with what BMW charges for its electric 5-series, the i5. As is the faintly scary £97,500 you need to spend to get into the S6 Sportback Edition 1, the only spec level initially available (and the Avant estate is £99,300). An even hotter RS6 e-Tron joins the party later, and might be worth waiting for if you want to stand out from the crowd. It gets wider arches and even shoutier bumpers compared to the S6, which, small Audi Sport badges aside, looks almost identical to the top-spec Edition 1 A6.

The fact that our car has been temporarily downgraded from the stock S6 21s to the 20-inch wheels you get on an entry-level A6 Sport to accommodate legally required winter tyres adds to the stealth/dull factor. Still, it retains some of the appeal of 2021's concept, including the slim daytime running lights that draw your attention from the real headlights hidden in the black void below, and the horizontal trim section beneath both doors designed to disguise the increased body height resulting from the underfloor battery.

A footwell that's noticeably raised to accommodate the 94.9kWh (net) power pack is another subtle reminder that you're in an EV. The interior set-up – including a combined digital instrument cluster and central touchscreen, plus an optional passenger-side screen – is almost identical to the hardware in this car's Q6/SQ6 e-Tron SUV cousin. It's also barely different from what you get inside the new combustion A5, the replacement for the A4, right down to the frustrating lack of physical controls and the location of the push-pull transmission toggle on the console.

Strangely, there's no need to use the starter button located ahead of it to start or stop the S6. It's as if Audi really wanted to be like Tesla – which doesn't fit starter buttons – but wimped out and put one in there anyway. Maybe – like the familiar interior and exterior design – it exists to make EV newbies and those on the fence feel reassured. ▶

Pick-up: 0 miles

We're meant to be taking an S6 Avant but Audi lobs us the keys to a Sportback because the wagon's big sat-nav display is on the blink.

22 miles

Ride quality on standard air springs is superb on these smooth roads. Regular A6s bound for the UK have coils and are unlikely to feel so plush.

47 miles

Virtual door mirrors are a £1495 option. Audi has moved the display further up on the door panel but viewing angle on driver's door is weird. Don't bother.

Do we miss the engine? Not much, although RS might be a different story. And the trees thank us

Chilton's line visible from space. Look and learn, Martians

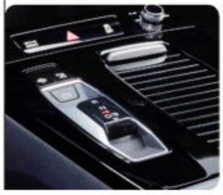
Relax, they say, this S6 is like your last S6, except it makes less noise. A lot less noise. First impressions as we slope along in thick traffic heading south-west are all about the incredible refinement. The doors, which get a soft-close function BMW doesn't offer i5 buyers, are double glazed, and the levels of wind, road and powertrain noise are incredibly low, even on normally noisier winter rubber.

Our car has the optional camera-based door mirrors, which probably aid the hush and also add a few miles to the range, but I'm not sure I'd bother. They're strangely bulky and ugly. But the real issue is the positioning of the screens, which Audi has raised since first introducing the tech on the e-Tron SUV in 2019. The one on the passenger side is okay, but the driver's display is mounted at a weird angle. It's like being the last one to arrive at your mum's house for an 18-person family event and being forced to watch James Bond at a 15° angle to the TV.

A more successful bit of tech is the augmented-reality head-up display, which helpfully points out our route when the autobahn exits are coming thick and fast, and also reminds you to keep a safe distance from the car ahead with a series of red stripes.

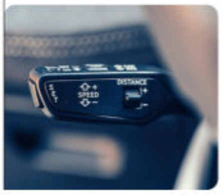
But it's the ride comfort that impresses the most as we hove in on the Austrian border. Air springs and adaptive dampers are standard, and with the Drive Select controller in Comfort mode you could forget the S6 has any sporting pretensions at all. It feels like a well sorted luxury express. And that's a good thing, but then so is delivering on the promise of that S badge, or you could save almost £15k by going for the A6 Edition 1. How does it justify that premium? Here comes one of those handy derestricted autobahn signs to help us find out. ▶

79 miles



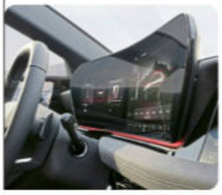
Interior quality is mostly excellent, though some of the lower plastics aren't so nice and the slideable cupholder cover in the console feels cheap.

91 miles



Audi has been using similar cruise control column stalks for years. A simple flick away to cancel the cruise is more intuitive than a button push.

103 miles



Alcantara-covered ledge where you naturally rest your thumb while using giant touchscreen is going to look awful a few thousand miles down the road.

It's last to arrive but it looks like it could be the best of the premium German executive EVs

111 miles

Sportback's boot is bigger than BMW i5's and same size as S6 Avant's until you drop the rear seats. Unlike the BMW, both Audis have a cable-size frunk.

136 miles

No need for the standard-fit seat ventilation when the temperature is as low as -12°. The heated steering wheel is pleasingly effective.

140 miles

Kaunertaler Gletscherstraße toll road reaches 2750 metres and is open all year round, but final section is covered in snow during the winter.

Winter tyres and switchable traction control work wonders

Audi is saving the bright badge paint for the RS

It's game enough to let us slide for the last half mile of hairpins with all the systems deactivated

The beefiest A6's dual-motor drivetrain makes up to 456bhp and can hit 62mph in 4.5sec. Stepping up to the S6 unlocks 543bhp and lops 0.6sec off that time. But in both cases those power figures are misleading. They're only available in launch mode, the automotive equivalent of one of those supposedly life-changing kitchen gadgets you convince yourself you'll use all the time but then find in the drawer three years after buying and trying once.

In the real world, whether you're duking it out with AMGs on the autobahn or banzai hot hatches on the B660, you only ever have 496bhp to play with. So while later experimentation with launch control reveals the S6 really can push you back into the excellent sports seats, it can't quite replicate that sense of urgency when overtaking. BMW's i5 M60 makes 593bhp, and though the 3.8sec 0-62mph time puts it only a tenth ahead of the S6, the difference feels bigger in roll-on manoeuvres.

The S6 EV is still a fast car, and much zippier than the old 339bhp combustion S6, which can't break 5.0sec (but costs £25k less). But it's nothing special by EV standards: a Tesla Model S Plaid might be hobbled by a left-hand-drive-only layout in the UK, but here in Germany that's not a problem, and its 1006bhp and ability to hit 62mph in less than 2.5 seconds make the S6 look tame.

The Audi levels the score when it comes to range between charges, in part thanks to a slippery 0.21 Cd factor (0.24 in the case of the Avant) that also contributes to the quietness we noticed earlier. The S6 trumps both the BMW and the Tesla with a 405-mile WLTP rating (388 miles for the Avant). That's slightly less impressive than the 463 miles delivered by the rangiest A6 e-Tron, the RWD Performance, but theoretically sufficient to take us all the way from Munich to the far side of Austria and most of the way back again.

Our car hasn't come with a full charge, and in any case those official figures aren't calculated at sub-zero temperatures. We need to find a plug. The navigation system suggests various options on our route, which we then filter to make use of the PPE platform's 800-volt charging tech. The symbol on the map says it's a fancy 300kW charger so we're expecting it to be accompanied by those other road-trip essential services, a toilet and somewhere to buy five times as much food as you eat in any normal day.

But when we get there it has neither. We're too far from the next charger for us to risk not hooking up here and I'm too close to peeing my pants to risk sitting through a full charge. Fortunately the S6, like all A6 e-Trons (and the Q6), can suck in 270kW and charge from 10 to 80 per cent in 21 minutes. An i5 takes 10 minutes longer even though its battery is 13kWh smaller.

That charge rate is still at least five times longer than it'd take a petrol car to onboard the same amount of fuel so I check out the back seats to pass some time and distract me from my bladder feeling like a tyre aired to 100psi. It's a major disappointment. Rear legroom is reasonable but the combination of high floor and short seat squab means there's no under-thigh support, a common EV bugbear. The sloping roof also means head space isn't huge.

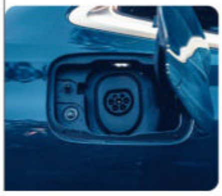
It seems like Audi put more effort into making your luggage feel at home. After an overnight stop in Imst we load our cases back into the S6, which offers a solid 502 litres of seats-up space in both the Sportback and Avant, plus another 27 litres up front for the charging cables. The petrol S6 saloon that's still on sale is slightly roomier (520 litres), but the old-fashioned non-hatch boot makes it less versatile than this new Sportback. ▶

S6 looks like an A6 when it's on these smaller wheels, for winter tyres

152 miles

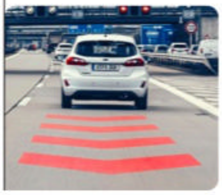
Washing your car at home is illegal here so sophisticated jet-wash stations using hot water are everywhere. It'll be dirty five minutes later, of course.

201 miles



S6 has two charging ports. One side takes an AC plug; the other has AC and DC holes. Max 270kW charge rate means 10-80 per cent in 21 minutes.

298 miles



We can live without the lap timer but the augmented-reality head-up display shows useful red chevrons to warn you you're too close to the car in front.

The sun's still asleep outside the Hotel Eggerbrau at 7am and when we drop the boot and the illuminated four-ring logo gleams in the dark. Its counterpart on the nose doesn't get the same treatment, even though sister company VW has taken advantage of legislative changes to light up its roundel. Audi's front logo is bigger than VW's, so would have to shrink to fit within the maximum allowed measurements, and the Ingolstadt design team wasn't prepared to make that kind of compromise.

But what ride-handling compromises have the engineering folks had to make to build a car that's meant to be more fun than the A6 but more comfortable than the upcoming RS6? We're in the right place to find out. The roads are different here; the scenery too. This is Tyrol country, a place where logs piled high punctuate the grassy fields and church steeples as pointy as hypodermic needles reach even higher. And though the street-level surfaces are free from snow, the white topping on the mountains that loom either side suggests at what's to come.

A hint of what the front tyres are up to is the most you'll get from the squarish, thin-rimmed, leather-wrapped wheel, and the tugs of the lane-keeping assistance tech are inclined to spoil what feel there is. But the weighting and gearing of the steering is well judged, much like the brake feel and the smooth – not awkwardly snappy, like some EVs – response to the first inch of throttle travel.

Those traits make the S6 easy to drive, both fast and slow. They also help make it more fun than the old A6, though some of the credit for that must go to the configuration of the all-wheel-drive system. A graphic on the touchscreen reveals that the front motor is dormant most of the time in normal driving, only waking to lend a hand when you lean hard on the right pedal.

Confidence-boosting understeer is the dominant characteristic, the ESP smoothly checking the rear axle's subtle lateral shift on the exit of tighter, damper corners long before you need anything as unseemly as opposite lock. It's not thrill-a-minute stuff, even if the body control and traction are good enough to be RS6-ready. But when, north of the Gepatsch reservoir, the Kaunertaler Gletscherstraße toll road to the ski resort turns fully white the e-Tron is game enough to let us slide it left and right for the last half mile of hairpins with all the systems deactivated.

On the way back to Munich we ignore the winter tyre warnings and hit 153mph before the limiter calls time, then grab another speedy injection of electric juice while enjoying the standard Bang & Olufsen hi-fi. The S6 is loaded with kit, including a switchable-transparency roof, air springs and ventilated nappa leather seats in UK spec.

But so it should be for £100k. The S6 has been a great tool for a mini road trip and has proved itself in all weathers but I can't help thinking you'd get much of the same experience, and even more miles between charges, out of a less expensive A6 e-Tron. Audi's own e-Tron GT, though more expensive, starting at £109,000, is also worth a look. The S6 is quietly capable, but we'd wait to see what the RS6 can do with this base before committing. car

Data

PRICE
£97,500

POWERTRAIN
94.9kWh battery, two electric motors, all-wheel drive

PERFORMANCE
496bhp, 428lb ft, 3.9sec 0-62mph, 149mph

WEIGHT
2410kg

EFFICIENCY
3.8 miles per kWh (official) 2.2-2.9 (tested), 405-mile range (official), 270 (tested), 0g/km CO2

ON SALE
Now

RATING
★★★★☆

Next month

OCTA – LAND ROVER'S MOST POWERFUL DEFENDER EVER

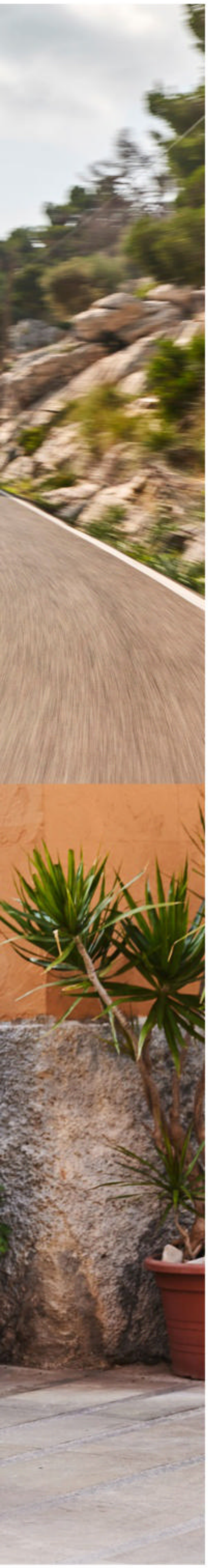
The S6 has been a great tool for a mini road trip and has proved itself in all weathers

SKODA
DA X 381 E

It’s actually less expensive than the equivalent petrol Karoq

SKODA
DA X 381 E
ELROQ

Skoda’s new look, allegedly. Still, nobody buys Skodas for their looks



SKODA ELROQ

The sensible choice

Like an Enyaq, but smaller. Quite possibly all the EV anyone needs

Skoda has already shown it can make a better EV than Volkswagen from the same bits and pieces, and now it's aiming to repeat the trick. After the Enyaq, the Elroq. It's the smallest electric SUV yet from the VW Group, and the EV equivalent of Skoda's popular Karoq, hence its name.

Priced from £31,500, it's not quite at Vauxhall Frontera levels of value, but it's less expensive than the equivalent petrol Karoq.

There are three powertrains available, badged 50, 60 and 85, with 52kWh, 58kWh and 77kWh batteries respectively. The official driving range spans 232 miles in the 50 to 360 miles in the 80; all can charge from 10 to 80 per cent in less than half an hour.

I drive the 50 (168bhp and 229lb ft torque) and 85 (282bhp and 402lb ft), and both are pleasant. The entry-level model lacks overtaking punch but is more than quick enough to keep up with traffic, but the 85 is the one to go for if you want pace – 0-62mph takes 6.6 seconds, but it feels brisker than that. For now in the UK, all Elroqs are rear-wheel drive.

If you boot the 85 out of a corner you can feel the rear bias, but the traction systems quickly reel the Elroq in. It's not a performance car – refinement and comfort are bigger priorities. The standard suspension is supple and well controlled, but optional adaptive dampers unlock more. Is anyone really going to pay £650 for them on their leased electric SUV? I think not.

The Elroq is the first Skoda to feature its new design language called Modern Solid, an awful name for essentially a new glossy black strip replacing the traditional Skoda grille. It's quite smart, but Skoda clearly ran out of creative energy as the rear is remarkably similar to the Enyaq, just scaled down.

Inside, it's all very Enyaq, too. A 13-inch touchscreen is fitted on all versions, bringing new shortcut buttons, though the icons themselves are quite small for use on the move. But, praise be, the Elroq gets a few more physical buttons than any VW ID.

Good materials, lots of places to lose things

There are great materials used up front, with the standard Loft interior bringing stylish grey fabric for the seats, door cards and dashboard. It has a fabulous Volvo-like feel to it. You can pay for other interior combinations, including a chintzy white interior with orange seatbelts.

A 'floating' centre console has plenty of storage beneath it, and there's room in the rear for adults to sit comfortably. It makes me question why you'd choose the Enyaq, unless the Elroq's 470-litre boot just isn't big enough. Various clever storage solutions are available, and I highly recommend the £250 Transport pack for its double-sided boot floor, variable boot floor and – most usefully – a net integrated into the underside of the parcel shelf to hold a charging cable. If you've ever faffed about trying to find a cable under the boot floor while it's raining, you'll know what a good idea this is.

But just be careful of Skoda's typically expensive options. The Elroq is brilliant value on paper, but extras can quickly add £5000-plus to the price, at which point it no longer looks like such a good deal.

TED WELFORD

First verdict

Spacious, good value and pleasant to drive. Another cracking electric Skoda. Catch up, VW

★★★★☆

THE FIRST HOUR

1 minute
Love the grey fabric interior. I feel like I'm in a Volvo XC

5 minutes
Seating position is excellent, so much adjustment

15 minutes
Oops, wrong way. U-turn time. Good grief, it's got a small turning circle

30 minutes
Time to hit the twisty stuff. It's surprising how well the Elroq handles

50 minutes
It's dawning on me that there's really nothing to dislike about the Elroq, and a lot to like. This should sell very well

PLUS

Drives well; neat cabin; good value

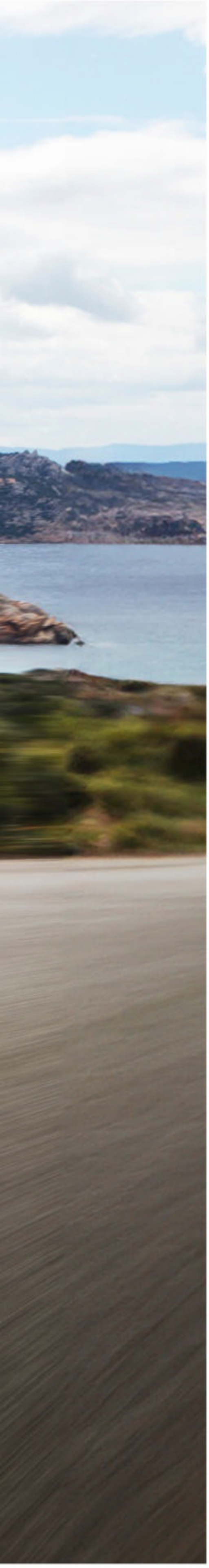
MINUS

New look is no big deal; options can send the price soaring

Data	PRICE	POWERTRAIN	PERFORMANCE	WEIGHT	EFFICIENCY	ON SALE
	£38,650 (Edition 85; range from £31,500)	77kWh battery, e-motor, rear-wheel drive	282bhp, 402lb ft, 6.6sec 0-62mph, 111mph	2119kg	4.0 miles per kWh, range 360 miles, 0g/km CO2	Now

There's the gloriously reassuring feeling that you always have loads of torque in reserve

Job one: don't look as ungainly as the 5-series. Tick



MERCEDES-BENZ E450D

Going out with dignity

The E-Class gets an unlikely new flagship engine: a superb diesel

Like peddling a new vial of Holy Blood on the eve of the English Reformation – other highbrow analogies are available – pushing a big diesel engine so late in the day feels a bit vulgar. However much you like big diesel engines there's no ignoring the direction of travel: time's almost up. They're thirsty, and harmful to the environment, and don't look so clever amid a congregation of low-capacity hybrid peers.

But current thinking at Mercedes is that it's good to offer a choice, and today's diesels are among the most efficient ever made. And here's an even bigger one.

The newly arrived E450d has become the flagship engine in the line-up. Producing 385bhp, it's usurped the plug-in hybrids as the E's most potent powertrain. It's a mild hybrid, but the majority of the power comes from the 3.0-litre straight-six, and it feels very much like a grunty old-school diesel. The mild-hybrid system provides just a little electrical tickle to smooth out the delivery.

From the bottom of the rev range to the top, the E450d pulls without respite. Up through the gears, past the derestricted signs to motorway speeds and beyond, the car goes and goes and goes, opening from a subtle hum to a full but solemn baritone at the top end.

The estate version will do 0-62mph in five seconds, the saloon in 4.8, before topping out at 155mph. For a big and heavy executive wagon without any AMG blessings, they're impressive numbers, but it's the effortlessness and dignity with which the E450d delivers power that has me so enthralled.

The car produces 553lb ft of torque, which on the road translates as a gloriously reassuring feeling that there's always loads in reserve. No matter how fast I'm going the nine-speed automatic gearbox plays its part well in helping me get it down smoothly.

Now as technological as it is comfortable

While in the drivetrain's sharper setting, the engine is so responsive that jabbing the throttle pedal feels like a kick in the back. That stops being fun very quickly. You get a much more satisfying experience by bleeding the power in smoothly. It's a car that'll reward you for mild-mannered driving inputs with deliciously tranquil yet firm acceleration. It goes fast, but doesn't feel rushed.

Where the E450d and I don't get on so well is in the way it rides. As the flagship model in the range, starting from £79,280 in saloon form or £81,530 for the estate, the E450d comes with all-round Airmatic air suspension as standard. Around town it's perfectly pleasant, but it's an oddly tuned system. The car bounces rather than floats, creating a wallowing effect. At low speeds you don't notice it much, but as I climb through the revs, and especially over uneven ground, it becomes more pronounced.

It's not a car for hooning around – it's a non-AMG Merc estate, so you wouldn't expect it to be. But what's disappointing is that this soft suspension doesn't soak up severe road blemishes very well. Particularly sharp pothole edges will send shocks through the entire car, and loudly too. So you end up slowing down a bit, and using less of that glorious engine's potential.

SETH WALTON

First verdict

The air suspension isn't great, but that's the only way to get this engine. As a package it's so close to brilliance…

★★★★☆

THE FIRST HOUR

2 minutes
E-Class estates are enormous, aren't they?

10 minutes
This thing has so much pull. I could go from roundabout to slip road all day

25 minutes
Light seasickness setting in; must ease off when the road gets bumpy

45 minutes
Still not over the power of this engine, but it's got to be used gently for the smoothest experience

56 minutes
This over a warm 5-series Touring? It makes a great case

PLUS

Smooth but firm power delivery; glorious soundtrack when you want it; comfortable on flat roads

MINUS

Throttle can be jerky; wallowy on air suspension; expect low mpg

Data	PRICE	POWERTRAIN	PERFORMANCE	WEIGHT	EFFICIENCY	ON SALE
	£81,530 (estate, AMG Line Premium)	2989cc 24v turbodiesel six-cyl, nine-speed auto, all-wheel drive	385bhp @ 4000rpm, 553lb ft @ 1350rpm, 5.0sec 0-62mph, 155mph	2140kg	42.8-44.8mpg, 160g/km CO2	Now

VAUXHALL FRONTERA

Every day's Black Friday

Vauxhall revives an unloved name for an unlovely but cheap family EV

For better and worse, this is the low-priced family EV people have been calling for. It costs £10,000 less than the physically smaller Vauxhall Mokka Electric. If you want a family crossover that's the size of the Nissan Qashqai, you'd be daft to overlook this.

The choice of Frontera for the new car's name is baffling, given how little recognition or affection is trigged by that utilitarian '90s 4x4. It's really a replacement for the also unloved Crossland. Less directly, it's also a replacement for the Zafira MPV.

It's significant not just for how low the price is – starting at £23,495 – but also for the fact that the electric and combustion versions of the Frontera are priced the same.

How is it so cheap? Mainly because it uses the Stellantis group's Smart Car budget platform, which also underpins the Citroën e-C3. It uses a small battery, just 44kW, and a weedy 111bhp motor, bringing less performance and less range than the Mokka.

The Frontera is a bigger and much more useful car than the old Crossland. Its boxy shape enables plenty of rear-seat space, and the 460-litre boot stretches to 1600 litres with the rear seats folded. Choose the 1.2-litre mild-hybrid petrol and you can even spec it with seven seats as a £550 option, which makes sense of the Zafira comparison.

It's quite narrow by the standards of this class, but that makes it easier to drive around town. You won't want to stray too far from the beaten track, with a 186-mile claimed range (expect 150 miles in the real world). It can charge at 100kW, enabling a top-up from 20 to 80 per cent full in less than half an hour. A 'Long Range' version with a 248-mile range will follow.

It's slow off the line; with only 92lb ft of torque, 0-62mph arrives in 12.1 seconds. But thanks to the Citroën roots of its underpinnings, ride quality is excellent. You can bounce it over speed bumps with little fuss, and its soft set-up handles uneven surfaces well. It's noisy for an EV, though, with lots of road and wind noise. I find myself checking I haven't wound a window down by accident. But at this price you make allowances.

Electric and hybrid look and cost the same

It handles more than well enough, with slow steering suiting the car's easygoing character. Push it and you'll get understeer, but it's generally no worse than far more expensive rivals. Bodyroll is also well-controlled for a top-heavy crossover.

The interior feels built down to a price. There's a decent touchscreen and real climate buttons, but a lot of the plastic feels like it's not been built to survive family life.

For £23,495, the level of equipment fitted as standard is impressive. There's a 10-inch touchscreen with wireless phone mirroring, a reversing camera and full LED lighting on the base Design trim. You can even get white steel wheels and a white contrast roof as part of a £400 options pack if you want your Frontera to look like a UN support car. Top-spec GS brings climate control, 17-inch alloy wheels and climate control for £35,895.

The arrival of the Frontera means that every new Vauxhall is now available as an EV. It could be a game-changer for the new-car market.

TED WELFORD

First verdict

An electric family car that delivers way above its price. Just be sure you can live with the limited driving range

★★★★

THE FIRST HOUR

1 minute
Wow, this is a big car for £23,495

5 minutes
Okay, this interior is cheap. Guess it needs to be when it's priced so low

10 minutes
The most irritating speed-assist bonging, and it's fiddly to turn off

30 minutes
Speed bump ahead and I'm not slowing. Rides well, especially around town

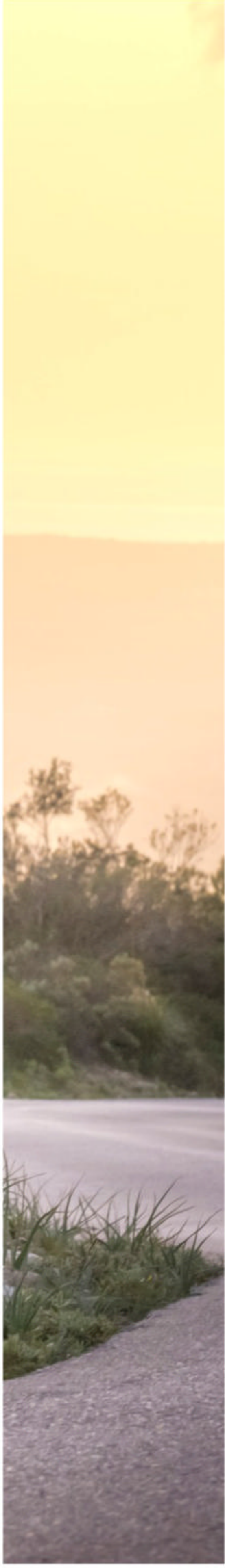
45 minutes
Sat at 75mph, the noise from wind and road is a bit much

PLUS
Astonishing value; spacious interior; very comfy ride

MINUS
Driving range; cheap-feeling interior

Data

PRICE	POWERTRAIN	PERFORMANCE	WEIGHT	EFFICIENCY	ON SALE
£23,495	44kWh battery, e-motor, front-wheel-drive	111bhp, 92lb ft, 12.1sec 0-62mph, 87mph	1514kg	4.2 miles per kWh, 186-mile range, 0g/km CO2	Summer 2025



Thanks to the Citroën roots of the underpinnings, the Frontera's ride quality is excellent

Control through corners is good, in an unsporty kind of way

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Opinion

E-JAGS + KNOBS AND SWITCHES + TWO-CAR GARAGES

Conti GT: lovely story about a lovely car

Letter of the month

Winners for a reason

I'll be honest, I was a little deflated when I sneaked a peek at the conclusion of the Sports Car Giant Test (December issue) and saw the podium; the same perennials left standing. Why wasn't there room for the Ioniq 5 N? Doesn't an EV that brings so much fun deserve more – surely more that the BMW M4 CS?

But the article answered my questions and I had to admit I wouldn't choose the 5 N over the S/T or the McLaren or even the ubiquitous M4. Maybe next year with an RS version of the 5 N…

Meantime I'll re-read what was a brilliant year-end Giant Test.

Richard Kavanagh

Ugly? No thanks

A couple of observations from the November issue. First, what a beautiful piece of writing Ben Miller's review of the Bentley Continental GT Speed was: I was right there in the passenger seat, enjoying the ride!

Second, with regard to Mr Dukec and his assertion that the vulgar visage of the BMW M3/M4 has not harmed sales, has he ever considered that people are buying them in spite of their ugliness, owing to his colleagues in the engineering department having done such a good job?

I am a long-standing M customer, including M3s and my current M2, and I can assure him I don't want to 'stand out' by driving an ugly car; I certainly would not buy a current M3 or M4, and I'm less than keen on the looks of the M2.

Let's hope Max Missoni can bring some elegance back to BMW; just think how many they'd sell if they were good to drive *and* to look at.

Patrick Limming

Dream ticket

Your 'two-car garage' piece (Welcome, November) is spot on. We run an 11-year-old diesel Skoda Yeti as our daily driver and do our long-distance European driving in a 2008 VW Phaeton V8 – two wonderful, indestructible cars that are a joy to own and drive.

Kingsley Flint

Once bitten, twice shy

So Jaguar is going to reboot as an EV-only purveyor in the rarefied air occupied by Bentley? Well, if my experience with Jaguar EVs is any indication, they are soon to be out of business. I bought a 2019 Jaguar i-Pace, based on rave reviews. For five years I too bragged about the stunning acceleration, SUV versatility and zero, I repeat, zero, maintenance cost. Then the warranty ended in January 2024. Since then I've incurred $9000 in repair costs. Jaguar USA has dug in its heels and refused to make an exception for a failure that occurred one month out of warranty. Fast forward to September and I was told a software fix was needed to eliminate a potential fire hazard, and in the meantime I should park the car outdoors. As my charging apparatus is inside my garage, the car was inoperable. I am fortunate enough to have other cars to drive but I wasn't happy seeing the i-Pace gather dust in my back driveway.

I ended up dropping by my local Porsche store and I traded it in for a 2024 Macan EV.

Now Jaguar wants to go upscale and charge EVEN MORE for the next generation of EV. I will not be one of those customers.

Kevin Whalen

5 N's a great achievement, but not the best car in the world

Don't forget the Lotus

Ben Miller notes that Jaguar's new strategy will put some clear water between Jag and the Chinese onslaught (Agenda, November). Well he would be right if the Lotus Emeya did not exist, occupying as it does the same space as the new 'Jaguar GT'.

That's worrying, as is the length of time this project is taking after the i-Pace dazzled the world. We were told the new Jaguar would be 2024, then '25 and now '26. I imagine I will have replaced my Taycan with an Emeya and possibly an improved version by then….

Mark Shaw-Smith

You're absolutely right, of course, though MD Rawdon Glover was reflecting on Jaguar's shift away from the mainstream space in which the likes of BYD are finding success. Lotus certainly doesn't price its cars like a typical Chinese brand. BM

With knobs on

The designers of the Bugatti Tourbillon and Pagani Utopia make a big deal of the analogue nature of their instrumentation and dashboards,

and they have minimised the acreage devoted to digital screens. Bentley's widely praised rotating dash allows drivers to choose between an infotainment screen, analogue dials and a plain panel.

These are luxury products, and production costs are less of a constraint than elsewhere in the industry, but perhaps this will be an instance of the trickle-down effect, where technology debuts in (say) the Mercedes S-Class before reaching their cheaper models. One can only hope that makers of more affordable cars will realise there is a marketing opportunity to be taken in offering an alternative to the currently dominant digital dash. Some may even be willing to pay a premium for physical dials, buttons and switches.

Before that happens, and in the spirit of resto-modding, might we see companies offering aftermarket conversions of digital dashes to more user-friendly and attractive analogue set-ups? Phones are quite capable of handling navigation and audio duties. Just think of all those fundamentally pleasing cars that would benefit from a better interface…

Thomas Chetwood

The upcoming CLA will debut some important innovations, which will trickle up to the S-Class, in a break with tradition. But don't hold your breath for physical buttons. CO

There's such a thing as too many knobs, it turns out

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Real rivals

As much as I thoroughly enjoyed the Ferrari versus Lamborghini piece (October issue), I feel you were a little disingenuous towards the Urraco, whose rival was never the iconic 246 GT. The real rival was the Dino's successor, the 308 GT4. Both cars were 2+2s powered by V8s. They also shared a coachbuilder, Bertone. I recall a comparison test between those two cars together with the Maserati Merak. If memory serves, I believe the Dino came out on top.

The 246 GT's only real rival was in-house, the 308 GTB.

I was disappointed that my nomination for the most beautiful automobile ever produced didn't crack your top 10, that being the Ferrari Boxer. Time it had its due.

Bryan Caldwell

Big issue

Reading the December issue, specifically Curtis Moldrich's first drive of the Cupra Terramar, it occurred to me that there's one important bit of information missing from the data in your tests – the car's dimensions, which are more of an issue as cars keep on getting bigger. Curtis says: 'Corner after corner, the size of the Terramar seems to shrink.' Size? What size?

Giuseppe Papuli

Fair point. Space vs useful info is an ongoing challenge. BM

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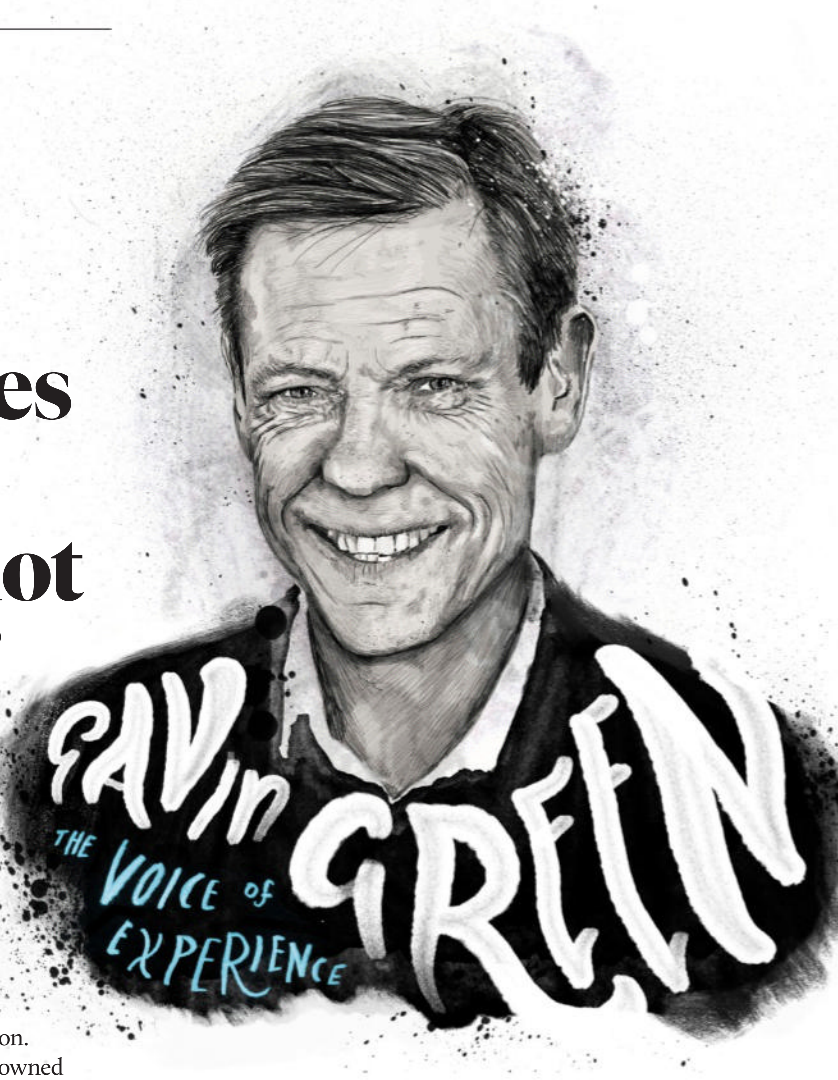
‘Success in the Brave New World of electric vehicles mostly means reinvention, not readjustment’



The last time Jaguar was in the limelight and causing controversy was probably 1987. In the lead-up to that year’s general election, a Conservative party political broadcast highlighted privatisation. Jaguar, newly liberated from state-owned BL, was celebrated and politicised.

Norman Tebbit quoted *CAR* heaping praise on the then-new XJ (the XJ40). When I finally croak, a line in my epitaph may read: ‘Gavin Green is the only motoring journalist ever quoted in a Tory party political broadcast.’

Since then, Jaguar’s cars have been largely ignored (especially outside the UK), despite some novel marketing initiatives. Britain’s most storied car maker no longer had a narrative.

Suddenly, last November, Jaguar was globally discussed and debated, derided and defended. Here was an old-school name, supposedly bought by old men, trending on TikTok and X. Of course I’m talking about THAT ad. It didn’t even show a car. It quickly got more than 160 million views, which must be at least 159 million more than any Jaguar ad before (and those who did watch the old ads still mostly bought a BMW).

Most seemed to hate it, including Nigel Farage and Elon Musk. But Jaguar was the world’s most talked-about car company. When it released its concept car a few weeks later – ironically in Donald Trump’s Florida – it was surely the most viewed Jaguar car launch since William Lyons renamed his car company 80 years ago.

I won’t go into the ad or the car: you have your views, probably strongly felt. But Jaguar is right to reinvent itself, and revolution not evolution was needed. It was time to give up or get up. Either pull down the shutters and join Rover, Wolseley, Austin, and Morris in the great British Motor Museum graveyard just over the road from JLR’s tech and design HQ; or be brave and give it one last well-resourced throw of the dice.

An audacious new styling direction, extravagant and brash, is also right. When one of these low and wide streamliners glides silently down the high street, it’ll certainly stand out.

It reminds me of those wonderfully decadent GTs of the ’20s. There are a few recognisable Jaguar styling cues too, not least the long snout and shallow glasshouse. Of the old Jaguars, it most resembles an XJS: a one-time failure that is now widely celebrated, and rightly so.

You can argue about the originality and appropriateness of the ad, and the new brand direction (and that logo). But Jaguar is one of the first ‘legacy’ car makers to realise that success in the Brave New World of EVs mostly means reinvention, not readjustment. An old-school internal-combustion heritage means less and less. Two of the three most valuable car makers in the world (Tesla and BYD) are new EV specialists, prized because of their future promise not their past glories. Mercedes and VW, old-school motoring royalty, struggle.

New-breed EVs are big mobile devices of staggering software and (potentially) stunning style. They are not animate mechanical marvels that snarl and growl and serenade and charm.

The great old Jaguars were the most animate cars in the world, which is why I loved them. The later cars failed because they weren’t (although I always liked the F-Type and i-Pace). But that’s all so yesterday. What matters now, for new Jaguar, is stand-out design and a great user interface.

Does it matter how its cars drive? Being good to drive didn’t do much for the i-Pace. The new Jaguar customer may not know who Mike Hawthorn or Lofty England were, or that a C-Type won Le Mans using pioneering disc brakes, although they’ll probably think an E-Type looks beautiful. Will they care much about human/machine empathy on B-roads? I’m not sure.

So, Jaguar won’t be quoting me. I’ll just have to be satisfied with Norman Tebbit.

Former *CAR* editor Gavin Green recovered from his brush with Normal Tebbit to become a leading global automotive commentator

Illustration: Peter Strain

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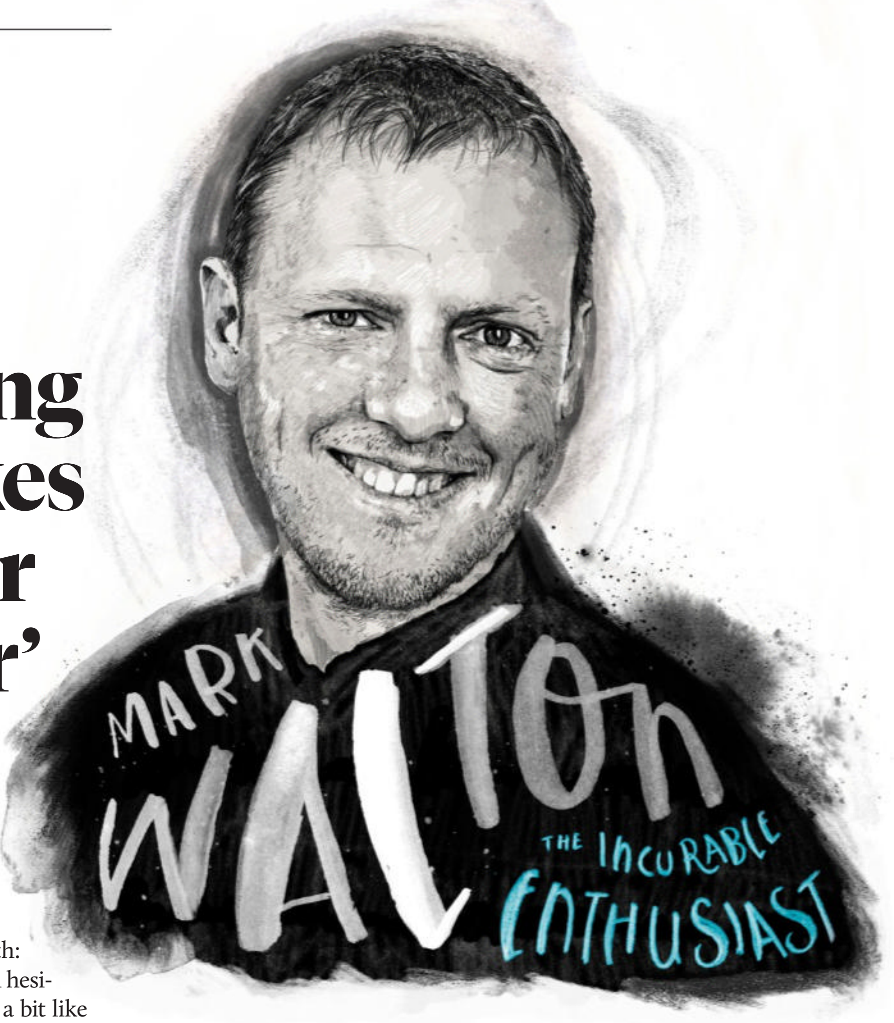
‘US car design works best when it looks really menacing – when it evokes the gangster or the gunslinger’



The new Scout Motors brand – owned by VW and recently launched in the US – means it’s time for me to confront the truth: friends, I love American styling. I’m hesitant to own up to this because it’s a bit like admitting to wearing a Stetson and cowboy boots and attending Wild West cosplay events. Classic American car design – like those baroque Chevrolets and Cadillacs of the 1950s, all the chrome, wings and jet-engine references – is not only over-the-top but also so overused, the subject matter of so many films and cheesy songs, it’s become corny.

But I like what came after that period, the reactionary flip to Modernism in the late ’60s and ’70s. American cars became minimalist masterpieces, slab sided and unadorned like a Mies van der Rohe skyscraper. Look at the 1966 Buick Riviera or a 1967 Dodge Dart – still huge, yes, but little chrome, no fussiness and barely any crease lines in the bodywork. It’s this pared-back restraint that the new Scout brand harks back to with its Traveler SUV and Terra pick-up, reimagining the original International Harvester Scout of the 1960s. Those early Scouts were boxy and functional and almost ‘unstyled’, deliberately. Basically a Modernist’s dream.

But for me, it isn’t just about the simplicity, it’s also about the Scouts’ facial expressions – it’s the look in their eye. The great British designer Peter Horbury – the man who reinvented Volvo in the 1990s – later moved to the States in 2004 to reinvigorate Ford’s (then very bland) US design. ‘No more European,’ was his remedy. At the 2006 Detroit show, he talked about how he was trying to make American design American again. ‘If there’s a change,’ he said, ‘it’s that we’ve stopped trying to be global in our design. Bold American design is something that’s ours to use. It’s not European.’

Talking about the new Fusion sedan, he explained, ‘The front of the Fusion was different three years ago. It was European. Now it’s open and friendly. It says, “Hi, I’m Dave. I’m American.”’

That description of US design would stay with him for the rest of his career (he became Peter ‘Hi, I’m Dave’ Horbury), but I disagree with his analysis. Rather than being open and friendly, I think US car design works best when it looks really menacing – when it evokes the gangster or the gunslinger, those anti-heroes of American mythology. Look at the headlights of the Scout and it’s not ‘Hi, I’m Dave’, it’s the stare of the masked Lone Ranger. Chris Benjamin, Scout’s chief design officer, referred to the Traveler having a ‘mask’, and he described the two new models as ‘bad ass’.

That Clint Eastwood hard stare is in the expression of all the great performance American cars of the ’60s and ’70s, from the original Mustang to the Dodge Challenger, and that’s why I love both the Scout models, with their wide stance, those clean uncluttered lines and, yes, that glowering face. Scout Motors strikes me as one of the most exciting and realistic of the recent electric start-up brands – which is why I’m so gutted it probably won’t be coming to the UK.

But fear not – if you’re looking for a bit of Dirty Harry, ‘make my day’ American styling, there’s always the brilliant Ford Raptor. Yes, I know, the mid-size Ranger pick-up was originally developed for Australia, but the latest generation of the beefed-up Ranger Raptor takes its design cues straight from the full-size, stars-and-stripes F-150.

And on UK roads the Raptor is just awesome, with all the 4x4 confidence of a Range Rover, the muscle of that 3.0-litre V6 and the visual presence of an American outlaw. That big vertical grille and the distinctive headlights that wrap around the huge FORD badge aren’t exactly minimalist, like the Scout, but if the Raptor has a face it’s one of a hitman or perhaps that other trope of great American cinema, the heavyweight boxer. It just looks so tough, and while US aggression may be frowned upon in polite society these days, I admit I loved driving this mean-looking pick-up among all those puny, milky white, European hatchbacks. Out of my way! Shock and awe!

Yes, yes – you’ll probably have fun psychoanalysing me for this. Told you it was a hard thing to own up to.

Editor-at-large Mark Walton loves pretty much everything with four wheels, from the Ford Ranger Raptor to the Renault Clio

Illustration: Peter Strain

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WHAT YOU SEE IS NOT WHAT YOU GET

The tempting family EV has arrived. So, electric Porsche Macan, Polestar's funky 4 or BMW's i5 Touring?

Words Ben Whitworth **Photography** Jordan Butters

OY74 XSZ
YB24 HYR

RE74 MFZ

The weather is absolutely atrocious out there. Heavy winds and sleety horizontal rain are sweeping in from the Channel, turning the numbingly cold winter evening into a wild living thing. Like a hermetically sealed bank vault the i5 feels utterly impervious to these conditions as it cuts smoothly and quietly along the coastal roads towards its rendezvous with Polestar's new 4 coupe-SUV and the latest Macan from Porsche. All three are battery electric, and all three are hugely desirable family cars.

As an EV-only marque post-Volvo, Polestar doesn't have to contend with the challenging transition from fossil fuel. With the might of Geely's backing, it's wrapping widely-shared platform architectures in adventurously bold genre-blurring designs laden with plenty of eye-catching technology.

Porsche has bet the house on its second-generation Macan. It may be instantly recognisable as Porsche's small SUV, but beneath that vaguely familiar silhouette sits electric-only architecture. Yup, in some countries the only new Macan you can now buy is an electric one, a huge risk for Zuffenhausen's best-seller.

BMW is not being anywhere near as rash. The 5-series/i5 can accommodate combustion, PHEV and EV powertrains, with all the manufacturing benefits and packaging compromises such a one-platform-fits-all approach brings. For all this ingenuity, the handsome G61 i5 still looks very much the traditional – some might even say outmoded – estate car.

Tickets to drive into our electrified future are wallet-wiltingly expensive. Key options on our range-topping Long Range Dual Motor 4 include £1400 for metallic Snow paint, a £1300 Pilot pack consisting of driver-assistance features, and a £4000 Performance pack that adds uprated Brembo brakes, 22-inch alloys with Pirelli P-Zero tyres, adaptive dampers, and gold finish for the brake calipers, tyre valve caps and seatbelts. That's £75,040 – big money, but the 4 is both Polestar's fastest model and the one with the smallest carbon footprint. Its 94kWh (net) battery serves front and rear e-motors that jointly generate 536bhp and 506lb ft for 0-62mph in 3.7sec and a 124mph top speed. Maximum charging speed is a so-so 200kW, for a half-hour recharge from 10 to 80 per cent.

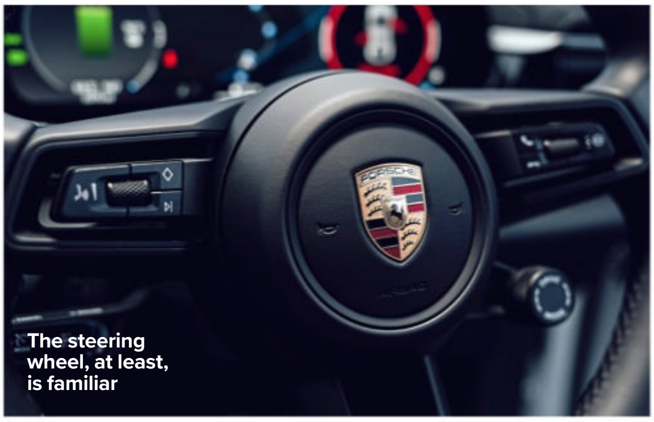
The twin-motor Porsche sits one step above the entry-level single-motor Macan and weighs in at £71,200. Our £78,978 car is fitted with options including an extended leather pack (£2805), comfort front seats (£899) and 360° parking assistance (£833). The motors dish up 382bhp and 479lb ft, fed by a 95kWh battery. Compared to the Polestar, it's a bit of an on-paper slouch, slipping silently to 62mph in 5.2 seconds and posting a 137mph top speed. It features the same 800-volt charging tech as the Taycan, and a 270kW maximum charging speed that should result in a 10 to 80 per cent charge in just 21 minutes.

The BMW swaggers into the ring and instantly makes its rivals look like Poundland bargains. This M Sport Pro Touring – currently in service on our long-term test fleet – wears a £79,355 price tag, hiked up to £94,995 by a further options. I know, right? That's a brand new Kia Picanto's worth of extra gear. Highlights include £2000 21-inch alloys, a £1600 panoramic glass roof, £3300 for the Technology Plus pack and £4600 for the Comfort Plus pack. So it's the dearest – but with an 81.2kWh battery driving a single rear-mounted motor that musters 335bhp and 295lb ft for a 6.1sec run to 62mph and a 120mph top end, it also has the smallest battery and on paper is the slowest car here. With a 205kW maximum you'll need to nurse a motorway coffee for half an hour to recharge from 10 to 80 per cent.

I climb into the intriguingly styled Polestar, which, despite the dirty grey weather, looks strikingly fresh and sharp. Its creases, geometric details and unusual proportions, penned by the now departed (to BMW) Max Missoni, hold your visual interest far longer than the Germans. It's exactly what you'd want a 21st Century electric car to look like. From the piercing headlamp slashes that flank its shovel-like nose, along its chiselled flanks to its stumpy rear end, complete with full-width brake light, the 4 catches the eye. But it uses a platform generally employed by the Geely group's less sophisticated ▶

> **PORSCHE'S ENGINEERS ARE MORE GIFTED AT MANAGING AND CONTROLLING MASS**

Great audio thanks to stunning refinement


The steering wheel, at least, is familiar

EVs versus winter? We do it, so you don't have to

Polestar 4's cockpit is gorgeous

Who doesn't love a handsome estate car?

More exciting colours are available

EVs, whereas the Polestar 3 has a more advanced set of underpinnings, and if you drive the 3 and 4 back to back you can tell.

There are a dozen cameras housed on the outside, but the most noteworthy are the rear-facing units that feed the rear-view 'mirror'. Why? Well, the 4 doesn't have a glazed rear screen. In a bid to balance aero efficiency, a visually pleasing roofline and headroom, Polestar's designers pushed back the rear header rail so it sits behind the passengers, rather than above them. This, they say, created an all but useless narrow letterbox-shape screen, prompting Missoni to opt for a solid panel, with rear vision provided by cameras. Interesting.

Swing open the frameless doors and you're greeted by a stunning cabin that's light, airy and welcoming. The clean minimalist architecture, the sophisticated mix of wonderfully tactile fabrics, plastics and leathers, the numerous surprise-and-delight details, the balance between understatement and luxury – it's really lovely in here and easily the lushest cabin I've sat in for a long time. Sumptuously comfortable too, with superb seats and acres of room for all, in all directions. The rear 60:40 split seats electrically recline, and rear passengers can operate their own climate control to create decadent business-class levels of supine comfort. Equipment levels are also embarrassingly high – you'll want for nothing. Decent room in the boot, too, with 526 litres plus a handy 15-litre frunk for cables.

The 4 runs Google's OS via a 15.4-inch landscape tablet that's very responsive, with shallower menus augmented by large, crisply rendered icons and alpha-numerics. If you absolutely insist on operating everything by screen, this is a small step in the right direction, although having to use the screen to open the glovebox resulted in much swearing. And why not make better use of the tactile rotary controller on the centre console, which only adjusts the volume and allows you to play and pause your music?

High hopes, then. But almost immediately I find the 4's low-speed ride quality just too brittle in even its softest setting. Too many imperfections are transmitted into the cabin instead of being deftly sponged away. These shivers, thumps and clunks turn the roads between Eastbourne, Lewes and Tunbridge Wells into uncomfortably jolting treks. If you invest in the expensive business of adaptive dampers surely you should have the choice of a 'wafty chauffeur' mode with an absorbingly plump and pillowy ride quality. It's the mode I keep wishing the 4 had, rather than too many rock-hard, zero-bodyroll options.

The ride improves as speeds increase, and with 536bhp and 506 lb ft to uncork the Polestar is rather good at getting a wiggle on. But this uncovers other shortcomings. It's quite noisy – blame those frameless doors. The 4's steering doesn't have the accuracy and crispness you'd hope for in a car with such points-gathering performance. Even with its 50:50 weight distribution, body control lacks the level of sophistication you'd want when taking the fun way home.

You both sense and feel the suspension is working hard, often too hard, when stringing together a series of curves on an undulating road. There's also no torque vectoring on the axle to sharpen up cornering angles. All of which means you invariably back off, left with the hard-done-by feeling that some of that expensive firepower will always be left untapped.

While the accelerator pedal has a well-calibrated and progressive response, whether you're nosing around a multi-storey car park or reeling in the horizon, the brake pedal lacks the same finesse. But the uprated brakes are certainly up to repeatedly hauling down the Polestar from big speeds without breaking a sweat.

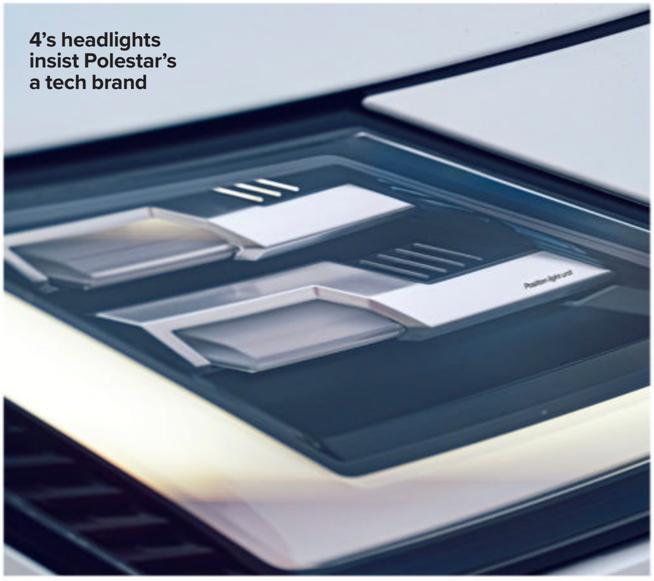
I give up after numerous attempts to acclimatise myself to the camera-fed rear-view mirror. I wear driving glasses and it took what felt like ages for my eyes to focus on the screen, and then too long to refocus on the road in front of me. So no subconscious eye-flick to the left and back to the road every few seconds to establish what is behind me. And the wind-blown rain kept obscuring the camera lenses, making the system all but useless, particularly at night. Today's weather is extreme, yes, but even so. And all this – plus a boot that no dog owner would find useful – to create a few extra inches of rear headroom. Meh.

Next, the Porsche – quite possibly the diametric opposite of the Polestar. After the Swede's arresting combination of creases and curves, the Macan is disappointingly dumpy and dull, with a generic SUV silhouette – it looks like it weighs every one of its 2330kg. The ▶

UNENCUMBERED BY COMBUSTION HERITAGE, POLESTAR HAS SURFED A BRAVE DESIGN-LED WAVE

PORSCHE
Macan 4

Full-width rear light, naturally



4's headlights insist Polestar's a tech brand

OY74 XSZ
YB24 HYR

Porsche not the most powerful. But tends to be out front

Tailored knit
Made for zero waste
100% rPET
brembo
Polestar

i5 40 doesn’t mind a little roll. Neither do we

ONLY THE LIGHTEST OF ROAD RUMBLE AND WIND RUSTLE GETS INTO THE EERILY QUIET CABIN

Macan is Porsche's biggest seller. It's shifted some 850,000 units since its launch a decade ago – and given the current febrile nature of the car market, tiptoeing gingerly down anything other than a very cautious evolutionary design path could easily lead to an existential crisis. But to my eyes this really looks like something phoned in on a Friday afternoon. When you drop the thick end of £80,000 on a Porsche you deserve something that makes you feel special. This does not, to look at.

Good job that what lies beneath is far more impressive. The Macan sits on the Volkswagen Group's shiny new Premium Platform Electric (PPE) architecture, which Porsche co-developed with Audi for the Q6 e-Tron. Its 95kW nickel-manganese-cobalt battery features 800-volt charging capability, and the prismatic cells can be split into two banks on a 400-volt charger for quicker and more efficient charging. Porsche quotes an optimistic 373-mile range, but you can realistically expect a still impressive 320 miles on a single charge.

After the Polestar's light and airy cabin and elevated driving position, the Macan feels like falling into a deep and black hole – but in a good way. It may be bereft of surprise-and-delight details but the fundamentals of the Macan's cabin are spot-on. You sit low in very supportive seats and grip a lovely thin-rimmed steering wheel, complete with knurled dial for the drive modes. The compact central screen is embedded within the dash, and can be so dinky because it doesn't have to handle absolutely everything under the sun, as the cabin is shot-gunned with physical buttons – for the climate control, mirrors, sound system and seat adjustment. How very refreshing.

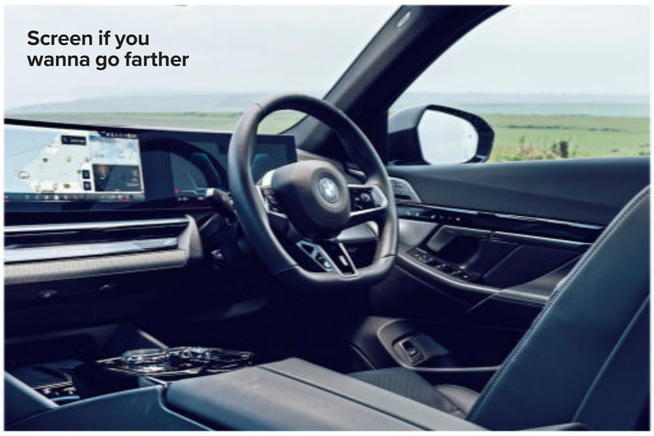
Rear passengers are short-changed, though. Accommodation is merely modest compared to the Polestar, there's not much light to break up the darkness, and no dedicated niceties to make trips that fraction more endurable. It's Ryanair to the Singapore first class the Polestar's passengers enjoy. That said, the Macan's cabin is intelligently configured, offering plenty of oddment storage space, supplementing the generous luggage room in the boot – an Ikea-friendly 540 litres of it, plus a generous 80-litre frunk – and the rear seats split 40:20:40.

The Macan's styling may disappoint, but the way is flows down the road most certainly does not. It drives exactly the way you'd want and expect a Porsche to, with steering, suspension, brakes and chassis all working harmoniously together to deliver a driving experience that's rewarding, comfortable and engaging in equal measure. Over the same roads that quickly exposed the Polestar's shortcomings, the Macan is in its absolute element, displaying real sophistication in the way it combines excellent body control with a ride that sets the ideal balance between firmness and compliance.

On paper it may be 154bhp down against the powerhouse Polestar, but it's only 27lb ft short of the 4's 506lb ft output. So in a straight line the Polestar would leave the Porsche for dead. But over a sodden and slippery Sussex A-road, that order would be quickly reversed, with the Porsche's superior athleticism and dynamic control allowing you to use more of its grunt more of the time.

As a pacey and dynamic point-to-pointer, the Macan is quite the thing. But don't think it can beat physics. It still feels like a big and heavy car, because at 4784mm in length and with a kerbweight of 2330kg, it is a big and heavy car. Porsche's engineers are just more gifted at managing and controlling all that moving mass than most. And we love them for that.

Polestar's done its best with a lacklustre platform


Screen if you wanna go farther

Just how chiselled do you like your front end?

You will probably be having enough fun to ignore the high levels of wind and road noise seeping through the frameless door windows and into the cabin, or to not worry about how the cheap-feeling climate-control housing flexes every time you touch it, or that a Polestar 4 will turn more far heads than your more expensive Porsche ever will.

I initially thought that the sheer normality of the i5, combined with its lottery-winner price tag, relatively modest performance, modest range and lack of outright sporting ambition would quickly push it out contention. But let's see.

The decision to create a modular platform capable of accommodating all manner of both combustion and electric powertrains is entirely understandable, given the billions required to create just one matrix, let alone dedicated architecture for different power ▶

4's gorgeous cabin really does offer first-class travel

PORSCHE
Macan 4
74 MFZ

DESPITE HAVING SAND KICKED IN ITS FACE, THE BMW i5 RARELY FEELS OUTGUNNED

sources. But it brings with it compromises as well as benefits, as heaving open the i5's big bonnet illustrates. Around the inverter, cooling systems and power electronics there's echoing empty space between bulkhead and front axle that's set aside for housing four- and six-cylinder petrol, diesel and hybrid powerplants.

Which explains that runway-long bonnet and a cabin that, though big enough for five, never feels quite as spacious as the i5's length suggest. They may not have the sprawling space the Polestar's passengers enjoy, but they'll be far more comfortable and pampered than the Porsche's. The driver's seat can be cranked right down until you feel just inches off the road, while that chunky three-spoke wheel has generous reach and rake adjustment, and the pedals are ideally positioned for two-feet driving. Rear passengers get their own climate controls, heated seats and integrated mounts for tablets.

The 570-litre boot is capable of swallowing everything from bicycles to bookcases. No frunk, though, even with all that dead space in the nose. And whoever made the inexplicable decision to ditch the opening rear glass hatch should spend the rest of their life walking barefoot on Lego bricks for their sins.

I'm still not sold on the i5's odd art deco-ish cabin design. The juxtaposition of a very traditional and familiar estate silhouette with an overwrought cabin style that incoherently mixes buttons and physical switches with haptic, touch and hand-gesture controls takes some getting used to. Bevelled glass iDrive controller, slabs of chamfered back-lit acetate, hexagonal laser-cut speaker covers… I'm not there yet. Nor am I fan of the multitude of apps for managing safety, driver assistance, infotainment and vehicle settings that are scattered across the central screen – a lesson in confused ergonomics.

But these mostly become trivial issues once you're on the move. Driving the BMW over the same roads as the 4 and Macan is like being wrapped in a 15-tog duvet and wearing earplugs. The cabin is eerily quiet, admitting only the lightest of wind rustle and road rumble, and the passive suspension does a superb job of both soaking up all manner of intrusions and dealing with undulations, cambers and changes of surface. The calibration of the brake and accelerator pedals and the precision of the steering is perfectly judged. You can manoeuvre this big car smoothly and with accuracy in tight car parks with the same confidence as you can brake late into fast corners and then meter out the power on the exit.

What a pity the marketing bods decided to install a Boost paddle that increases torque by 22lb ft for 10 seconds. A 'kickdown', prompted by a big old swing on the accelerator pedal, would surely feel far more intuitive. Or better still, give us all the torque all the time.

Despite having sand kicked in its face by the Porsche and Polestar, the i5 rarely feels out-gunned by its rivals when the roads begin to twist, turn and become vaguely interesting. Like the Macan, the i5 feels poised and capable, like it's always operating well within its dynamic limits. Sure, it rolls, pitches and dives to a greater degree than the other two over the same roads. But its body movements are so well controlled and progressive, its steering so quick and well-weighted, and its brakes so powerful and easy to modulate that you can really lean on the i5. It's a 2355kg electric family estate you can hustle along with terrific confidence, and, more importantly, with a grin on your face. ▶

Rising sea levels? Less of an issue with these three

THE FINAL RECKONING

NO MAGIC BUT SOME QUALITY

Working out that the Polestar 4 gets the bronze medal is far easier than splitting the BMW and the Porsche. I had high hopes for this Sino-Swede. Unencumbered by combustion heritage, Polestar has surfed a brave and bold design-led wave of success, and the genre-bending 4 continues that trend. A brilliantly executed and lush cabin with acres of lounging room, an intuitive infotainment system (so far as one-screen systems go) and styling that makes its rivals look staid – brilliant stuff, rounded off with 300 miles or more of real-world range and the kind of acceleration usually reserved for McLaren drivers.

Frustrating, then, that all this promise is let down by a brittle and intrusive ride quality, ho-hum levels of cabin refinement and chassis dynamics that really don't feel up to managing 2355kg of very fast-moving metal over roads that would put a glint in the eyes of the Porsche and BMW. And for me that digital rear-view mirror is maddening. Some others on the team found it less irksome, it should be noted.

The i5's cosseting comfort, refinement, proper swallow-all versatility and highly accessible performance make it near-perfect family transport. Yes, you may find yourself cursing its range and ho-hum charging speed now and then, but learning to live with its ritzy-glitzy cabin design is easy enough. It only takes a few miles to realise the money has been intelligently spent, imbuing the BMW with refinement levels and a ride quality the others cannot match. Better to really enjoy driving every mile of those shorter journeys than endure being rattled about on longer trips in the Polestar, yes?

For a 2330kg Porsche with no chainsaw flat-six in sight, the Macan is impressively rewarding to steer down any road. It'll handle daily commutes, longer trips and family logistics with ease, and you'll get to say you own a Porsche, even if it is frumpy and terrifically dull to look at in this spec, like a lardy Stormtrooper that's been at the pies, has the cabin ambience of a coal mine in a power cut and lacks any real sense of occasion.

The Macan squeezes ahead then, in a photo finish that's also a snapshot of an industry doing its best to weather multiple overlapping storms. car

1st

PORSCHE MACAN

Class-leading dynamism; decent versatility; solid range and performance

★★★★★

2nd

BMW i5

Inefficient. But refinement, loadbay and pace are big positives for families

★★★★★

3rd

POLESTAR 4

Fast, with a lovely, well-equipped cabin. But lacks refinement and the ride's abrupt

★★★★★

The winter of our mostly content

BMW i5 TOURING

▶ What's the line-up?
Ownership starts with the £69,945 Sport Edition. Stepping up to the spanglier M Sport will take that up to £76,355. The M Sport Pro, like ours, adds another £3000 to the bill. All are rear-wheel drive and share the same 81.2kWh battery; 593bhp M60 xDrive is an extortionate £99,995.

▶ Data
Price £79,355 (£94,995 as tested) **Powertrain** 81.2kWh battery, single e-motor, rear-wheel drive **Performance** 335bhp, 295lb ft, 6.1sec 0-62mph, 120mph **Weight** 2355kg **Efficiency** 3.3 miles per kWh (official), 2.9 miles per kWh (tested), 311-mile range (official), 235-mile range (tested) **Boot capacity** 570 litres

POLESTAR 4

▶ What's the line-up?
There are only two models in the Polestar 4 line-up: the standard £59,990 car with a single 268bhp motor driving the rear wheels; and the dual-motor flagship with a combined 536bhp from the motors, one over each axle, and active damping. Both feature the same 94kWh battery.

▶ Data
Price £66,990 (£75,040 as tested) **Powertrain** 94kWh battery, twin e-motors, all-wheel drive **Performance** 536bhp, 506lb ft, 3.7sec 0-62mph, 124mph **Weight** 2255kg **Efficiency** 3.9 miles per kWh (official), 3.2 miles per kWh (tested), 367-mile range (official), 301-mile range (tested) **Boot capacity** 526 litres plus 15-litre frunk

PORSCHE MACAN

▶ What's the line-up?
The range kicks off with the basic £68,500 Macan, powered by a 355bhp electric motor. Three all-wheel-drive twin-motor models follow: the 382bhp Macan 4 priced at £71,200 (tested here), the 509bhp Macan 4S and the face-rearranging Turbo (630bhp, £96,900).

▶ Data
Price £71,200 (£78,978 as tested) **Powertrain** 95kWh battery, twin e-motors, all-wheel drive **Performance** 382bhp, 479lb ft, 5.2sec 0-62mph, 137mph **Weight** 2330kg **Efficiency** 3.4 miles per kWh (official), 3.2 miles per kWh (tested), 373-mile range (official), 322-mile range (tested) **Boot capacity** 540 litres plus 80-litre frunk

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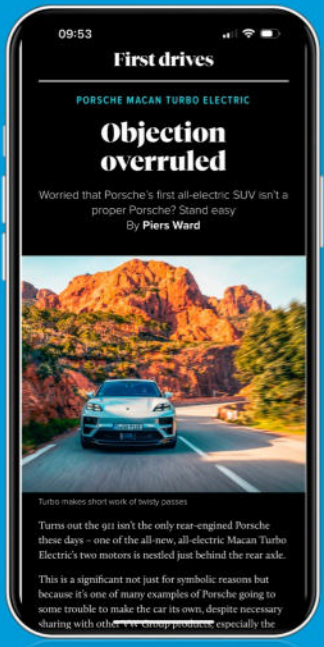

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First drives

PORSCHE MACAN TURBO ELECTRIC

Objection overruled

Worried that Porsche's first all-electric SUV isn't a proper Porsche? Stand easy
By Piers Ward

Turbo makes short work of twisty passes

Turns out the 911 isn't the only rear-engined Porsche these days – one of the all-new, all-electric Macan Turbo Electric's two motors is nestled just behind the rear axle.

This is a significant not just for symbolic reasons but because it's one of many examples of Porsche going to some trouble to make the car its own, despite necessary sharing with other VW Group products, especially the

PLUG & PLAY

A new generation of electric performance cars has arrived. Did they remember to pack the fun? You bet they did – bags of the stuff

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NEW CARS
25

From bargain EVs to fuel-fired supercar heroes – we rank the 25 most important cars coming soon

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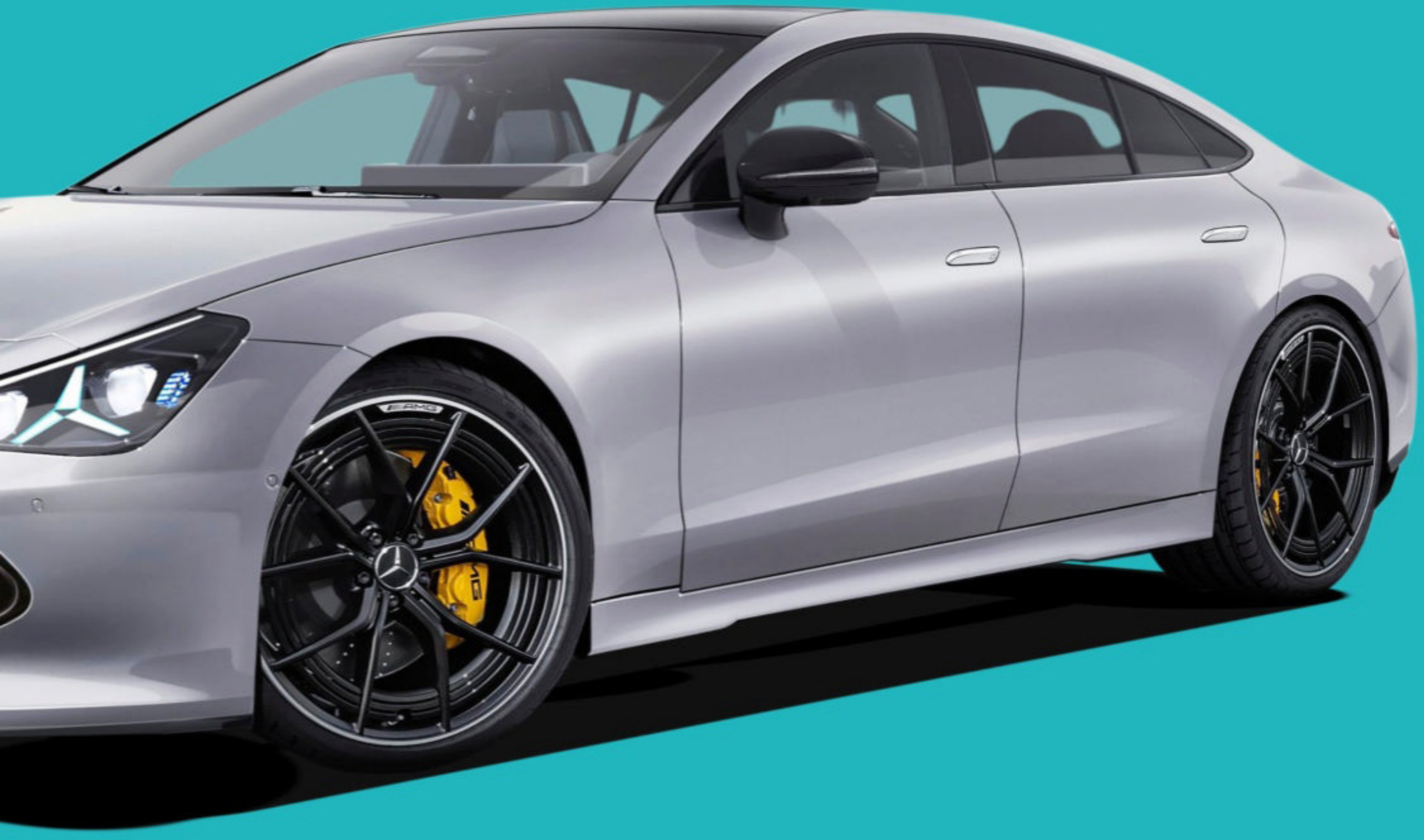
AMG GT 4-DOOR EV

THINKING THE UNTHINKABLE

It's finally time – whether we're ready or not – for an AMG model that makes zero noise

Words Georg Kacher **Illustrations** Lars Sältzer



All electric and all AMG: debut of an intriguing combination

The mission for 2025, summed up a few years back by Mercedes CEO Ola Källenius, is easy to put into words: 'Beat Porsche at their own game.' Easy to say, hard to do – especially at a time when so many factors are in flux.

The Mercedes vision had, like Porsche's, involved transitioning rapidly to an electric-only line-up. That's all gone a little awry as demand has slowed and political priorities have shifted. And yet, despite all the opportunities for revising the plan and reining in the ambition, the Mercedes performance division is still full steam ahead – or should that be maximum voltage ahead – for its first electric car.

AMG isn't starting small, either, targeting the likes of Porsche's Taycan, the Lotus Emeya and Polestar 5 with an electric GT first. The zero-emissions AMG GT 4-Door, codenamed C590, will launch towards the end of 2025. It will combine extreme power outputs, smart battery designs and cutting-edge motors. It uses the new AMG.EA architecture, which is currently undergoing weather and stress testing.

Its e-motors are to be produced by Mercedes at its facility in Berlin, but their design and know-how originates in Oxford – home of the specialist supplier YASA, an R&D partner of the Mercedes-AMG Petronas F1 team, and a wholly-owned Mercedes subsidiary since 2021, although not confined to working for Mercedes; see more on YASA in this issue's Agenda section.

High-rpm axial-flow electric motors have been chosen over radial-flux units for their compact dimensions, superior efficiency and light weight, claimed to be less than 25kg per unit. The motors are, sources tell us, smooth and quiet, with well-managed heat dissipation, high power density and reasonable costs. Together with a space-saving epicyclic transmission, a torque-vectoring device and a trick electronic control system, the motor is an integral part of the eATS 2.0 electric drive unit.

YASA is ready to provide many different combinations of e-motors, but we understand AMG will at least initially refrain from offering the most radical four-motor layout – even though something along those lines is likely to feature on BMW's electric M car due in a few years.

Each state-of-the-art motor is reportedly good for 479bhp and 590lb ft – yes, each. For rear-wheel-drive applications, that means 958bhp and 1180lb ft is available. Adding a third motor with the same outputs would bring the total to a hefty 1267bhp and 1383lb ft, but don't take those figures as gospel. What we do know for certain is that AMG.EA uses an 800-volt electrical system and features a new generation of tubular lithium ion batteries with bespoke cell chemistry and silicon anodes.

The 100kWh battery pack should be able to provide a WLTP range of 375 to 450 miles and a high-speed charging time of about 15 minutes from 10 to 80 per cent charge. Performance? Provisional data for the top-of-the-line three-motor model suggests a 2.0sec 0-62mph sprint, 0-125mph in 5.0sec and a maximum speed of 200mph.

THE HIGHLY FLEXIBLE DNA CAN COVER THE FULL SPECTRUM FROM A LOW-SLUNG SUV TO A TWO-SEAT HYPERCAR

It would be financially ruinous to create just one model from an entirely new architecture. That's why AMG.EA has at least three more models in its medium-term portfolio. Aluminium-intensive, the light and stiff new multi-material architecture is fully scalable in terms of wheelbase, body style variations and engineering content. The highly flexible DNA can cover the full spectrum from a low-slung five-seat SUV (codenamed X591, due in 2027) to a two-seat hypercar (C592) capable – in its most extreme guise – of outpacing even the F1-inspired AMG One hypercar.

The electric AMG's design is still a work

in progress. While it shares cues with the MMA-based new CLA and the super-efficient EQXX concept, the more adventurous SUV is believed to break new ground as the most dynamic-looking crossover to date, visually eclipsing even the Ferrari Purosangue and the Aston DBX.

All AMG.EA cars will get distinctive daytime running lights and six equally striking tail lights featuring three-pointed star patterns. The four-door coupe boasts a prominent pop-up rear spoiler for increased high-speed downforce, plus flush-fitting door handles, low-drag 22-inch alloys, concealed windscreen wipers and a flap-operated active battery cooling system.

Unlike Audi Sport and BMW's M division, Mercedes-AMG has gone in hard on EVs and invested heavily in this bespoke AMG.EA matrix and hasn't yet backed down – even as the mothership abandons its more luxury-focused MB.EA version.

AMG is not taking a blinkered approach, however, and will have been particularly interested in the recent declaration from Porsche chief financial officer Lutz Meschke – made in the context of the general dimming of the industry's enthusiasm for an electric-only range of cars – that combustion engines should get a new lease of life, which will need an accompanying set of more flexible platforms.

Although legislators still plan to ban the sale of new petrol-fed models in Europe from 2035 onwards, other markets including the Middle East and US will still want to hang on to Affalterbach's potent V8s. So much so that this new electric AMG GT 4-Door won't immediately replace the current combustion version.

AMG needs to make a decision for the longer term: update the long-running MRA platform that underpins everything from C-Class upwards, or jump-start a new platform that will run electric as well as combustion power – as it has done with the new Mercedes Modular Architecture platform for its smaller cars.

Neither option will be cheap, but Mercedes and AMG need to decide.

NEED TO KNOW **What is it?** AMG's first all-electric performance car | **Tech?** New AMG.EA platform, high-power YASA-based axial-flux e-motors | **Aimed at?** Resetting AMG's priorities | **When can I have one?** We'll see it at the end of 2025; first deliveries expected in early '26

ENGINES: NOT DEAD YET

'Mercedes wouldn't be Mercedes if it wasn't pushing the limits,' smiles the company's chief technology officer, Markus Schäfer. As well as the new Mercedes Modular Architecture (as used in the upcoming CLA also featured in our New Cars 2025 list), which Schäfer says promises to be 'a benchmark for the segment', performance division AMG is pushing its own platform development to the limit.

'We have a great new platform, a very authentic performance one,' says Schäfer on AMG.EA. 'It's equipped with possibly the most advanced electric motors on the market, really setting benchmarks. The battery is extraordinary, too – the pack will support an authentic AMG sports car.'

But even he acknowledges that Mercedes and its sub-brands have had to slow down, so AMG won't be letting go of engines just yet. 'We've never stopped working on engines,' he says. 'We have this parallel world of technologies, and we'll have to continue in this dual world for some time.

'Would we wish that things would be less complex? Yes. We don't have a crystal ball. But dealing with complexity is something that we've learned over 130 years of vehicle development, and we can be flexible,' he says.

'It's still an electric future, but the question is the speed at which we get there and the acceptance in society – the customer makes the decision, not the regulator. Electric cars offer great advantages, but we're still in the transitioning phase.'

JAKE GROVES

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HONDA PRELUDE

HIT-AND-MISS HONDA SHOOTS AGAIN

Will the new coupe soar (like a two-door Civic Type R) or sink without trace (like the CR-Z)? By **Jake Groves**

IT'S A LEGEND, HONESTLY

The Prelude is one of the most revered names in Honda's history, it claims. Project lead Tomoyuki Yamagami tells *CAR* there are 'no gimmicks' in the design – just a clean shape, a wide stance and some subtle performance hints like Brembo brakes.

NOT A CROSSOVER

Honda is bucking the trend upsetting enthusiasts; namely old names being resurrected as crossovers. Just look at the Capri fallout. 'We're seeing more SUVs because that's the easiest application that you can do with electrification,' points out Yamagami.

HYBRID POWER, NO MANUAL

Preludes have always had other Honda DNA in them – mostly Accord or Civic. This one will be no different, using the very good 11th-gen Civic's architecture and hybrid power. It'll still have a CVT, but one with 'S+' technology that mimics a dual-clutch.

EVERYDAY FUN, EVERYWHERE

'We've carefully selected the technology, imagining a potential customer that uses the car not just for trackdays but every day,' says Yamagami. Like earlier Preludes, this one will have rear seats – with Honda promising they'll fit actual people in this time.

NEED TO KNOW

What is it? A hybrid Honda that's not an SUV | **Tech?** Sharp Civic chassis, 'S+' gearbox tech | **Aimed at?** Honda fans drawn to sporty quirkiness | **When can I have one?** The finished production car is expected in late '25, but won't hit Europe until early 2026

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■BMW iX3■

KLASSE ACT

The shock of the new

BMW's throwing everything at keeping up its electrification momentum. We'll see everything from a 2-series right up to an X7 run on the platform, but Munich is starting with the heartland – a new-gen iX3 to replace the tired current one. Boring? It might sound it, but the new iX3 will have fast charging enabled by 800-volt tech and modular batteries that allow for lots of powertrain options.

NEED TO KNOW **What is it?** An electric X3, but one that's full of cutting-edge engineering | **Tech?** All-new Neue Klasse platform with efficient batteries and lightweight e-motors | **Aimed at?** Kicking off BMW EV 2.0 | **When can I have one?** Summer 2025

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■NISSAN LEAF■

REMEMBER ME?

Leaf branches out

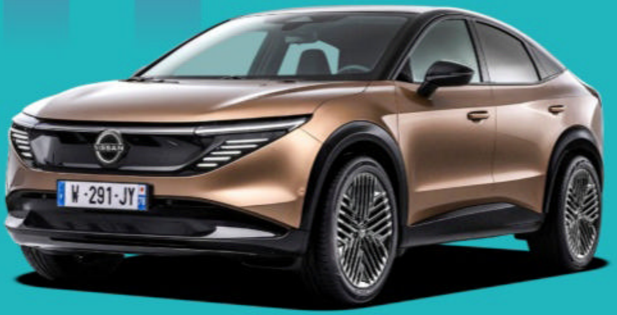

illustration Andrei Avarvarii

Once a pioneer, now mainstream – Nissan's next-gen Leaf finally arrives in 2025. Prototypes and concept cars show a silhouette similar to the Polestar 2 and Ford Capri, with a slick design that evolves the language already seen on Ariya. It'll run on AmpR Medium (the same platform as the Ariya and Renault Scenic), but Nissan is at pains to point out it will be doing its own e-motors and software.

NEED TO KNOW **What is it?** Nissan's third-generation Leaf EV | **Tech?** Bespoke Nissan e-motors, Ariya interior tech, trendy bi-directional charging | **Aimed at?** Reasserting Nissan's EV dominance – remember that? | **When can I have one?** We'll likely see it summer 2025

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■VOLVO ES90■

EXECUTIVE EV

Swede ride o' mine

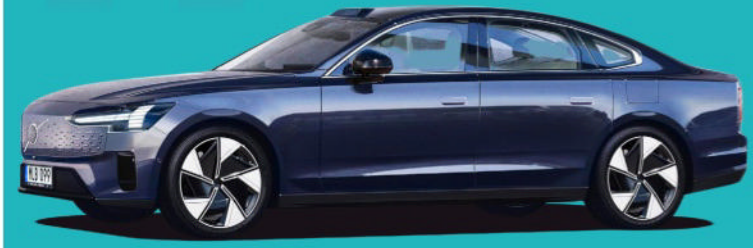

illustration Lars Sältzer

Scandinavian captains of industry rejoice – your next company limo has arrived. One of two electric Volvos we'll see in 2025 (the other being an ES60 SUV), the new ES90 is a natural competitor to BMW's i5, Merc's EQE and the new Audi A6 e-Tron. Volvo hopes to solve some of its software woes by introducing a system that is entirely unified across all its cars, saving development time.

NEED TO KNOW **What is it?** Volvo's first electric saloon | **Tech?** Evolved software from EX90, driver-monitoring safety aids, potent e-power | **Aimed at?** Being a sleek, slick Scandi operator | **When can I have one?** Likely late 2025

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■DACIA BIGSTER■

FAMILY VALUE

Lame name. Great price

Handsome, useful and great value, Dacia's new Bigster is on the way with its chunky looks, sensible interior and mahoosive boot. Dacia's been clever here, introducing just enough luxury for those who buy this kind of car, and has thought of all sorts of smart ways to make the Bigster add up – so much so that we're predicting a £25k starting price when it launches early in 2025.

NEED TO KNOW **What is it?** Dacia's biggest car yet | **Tech?** Efficient hybrid power, new-to-Dacia tech like electric seats and tailgate, vast boot | **Aimed at?** Dramatically reducing the price of your next family car | **When can I have one?** First few months of 2025

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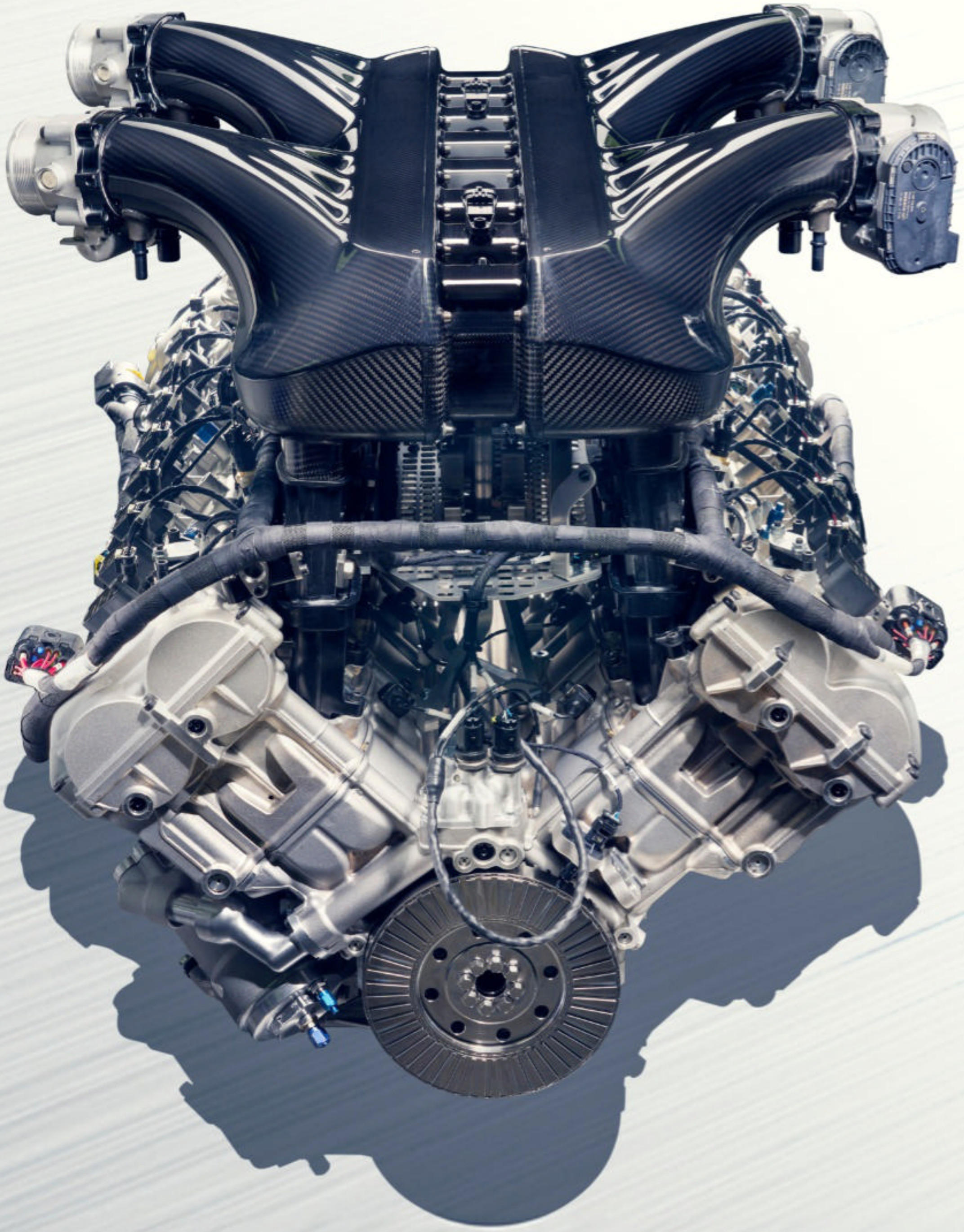
■ BUGATTI TOURBILLON ■

ALL HAIL

The new Bugatti is dominated by its V16, a masterpiece from 2025's new home of extraordinary engines

Words Gavin Green **Photography** John Wycherley



The patina of a 37,000-mile run on the dyno

In a bland industrial estate in Northampton, near a plumber's merchant, a building-materials supplier and car-parts superstore, lies the world's finest small-volume builder of high-performance engines. The Northampton Saints rugby ground is close by, and just 14 miles away and rather more relevant to our tale is the Silverstone racing circuit, home to some of the company's greatest victories.

Cosworth won its first British GP there in 1967. It would power the winner of our home GP a further 13 times over the next 15 years. Its Ford-badged DFV V8 is the world's most successful F1 engine, designed, engineered and built in that unprepossessing industrial estate. It powered nine different drivers to a total of 12 Formula 1 world drivers' championships.

The company also became famous – and later infamous – for powering and lending its name to the most desirable and fastest version of the Ford Sierra. Sadly, the fine Sierra Cosworth, with its extravagant and peak-'80s wing, became better known for its propensity to attract car thieves.

Nowadays, Cosworth moves in more elevated circles. Far from building the engines that power war-painted mass-market Fords, it designs and hand-builds exquisitely detailed V10s, V12s and now V16s for the makers of the world's most expensive sports cars, including the one I'm seeing today, the V16 in the Bugatti Tourbillon.

The least expensive car it powers costs £1.37 million plus taxes (the Gordon Murray Automotive T.33). The most expensive is Adrian Newey's parting gift to Red Bull, his RB17 track car – at £5.75 million plus taxes.

Cosworth reinvented itself 10 years ago. Its first project was Adrian Newey's Valkyrie. 'The methodology and mindset haven't changed,' says Bruce Wood, Cosworth's managing director. 'It comes from a lifetime of motor racing and it translates very well into hypercars. We know how to make powerful and reliable engines. We made the first F1 engine to rev to 20,000rpm [the naturally-aspirated V8, codenamed CA, from 2006], so 11,000-12,000rpm is second nature to us.

'We have the experience. I've just clocked up 37 years here and I only just make it into the top 10 of longest-serving people. Hundreds of staff have been here decades.' (Four hundred people work for Cosworth.)

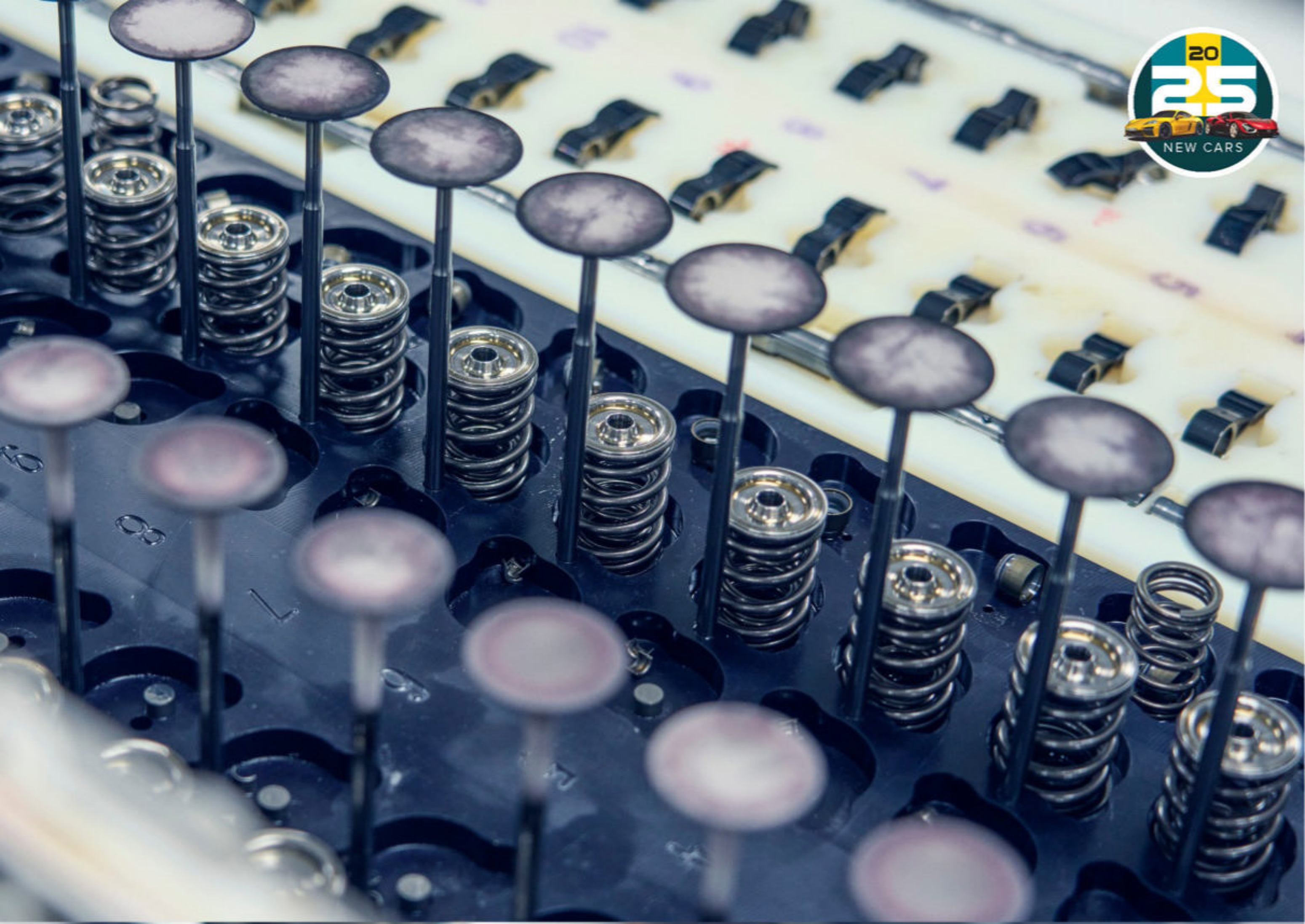
The machining of all major engine components, including the beautiful Bugatti Tourbillon's crank and camshafts – almost a metre long– are done by Cosworth. All pistons are forged in house, too. 'All the analysis, all the design, all the prototype manufacturing, all the dyno testing, developing and production manufacturing is done under one roof. We're very vertically integrated. That's another racing carryover. You don't want rivals to see your secrets. Plus, doing it ourselves ensures quality and speed of delivery.'

Bruce says Cosworth first grasped the potential of making ultra-high-performance, ultra-low-production road-car engines with the 2011 Aston Martin One-77, which used a 7.3-litre V12, developed and built by Cosworth but based on the existing Aston V12. Simultaneously, Jaguar asked them to develop the supercharged and turbocharged 1.6 four that was to power the lovely C-X75 (sadly stillborn, although it did feature in a James Bond movie).

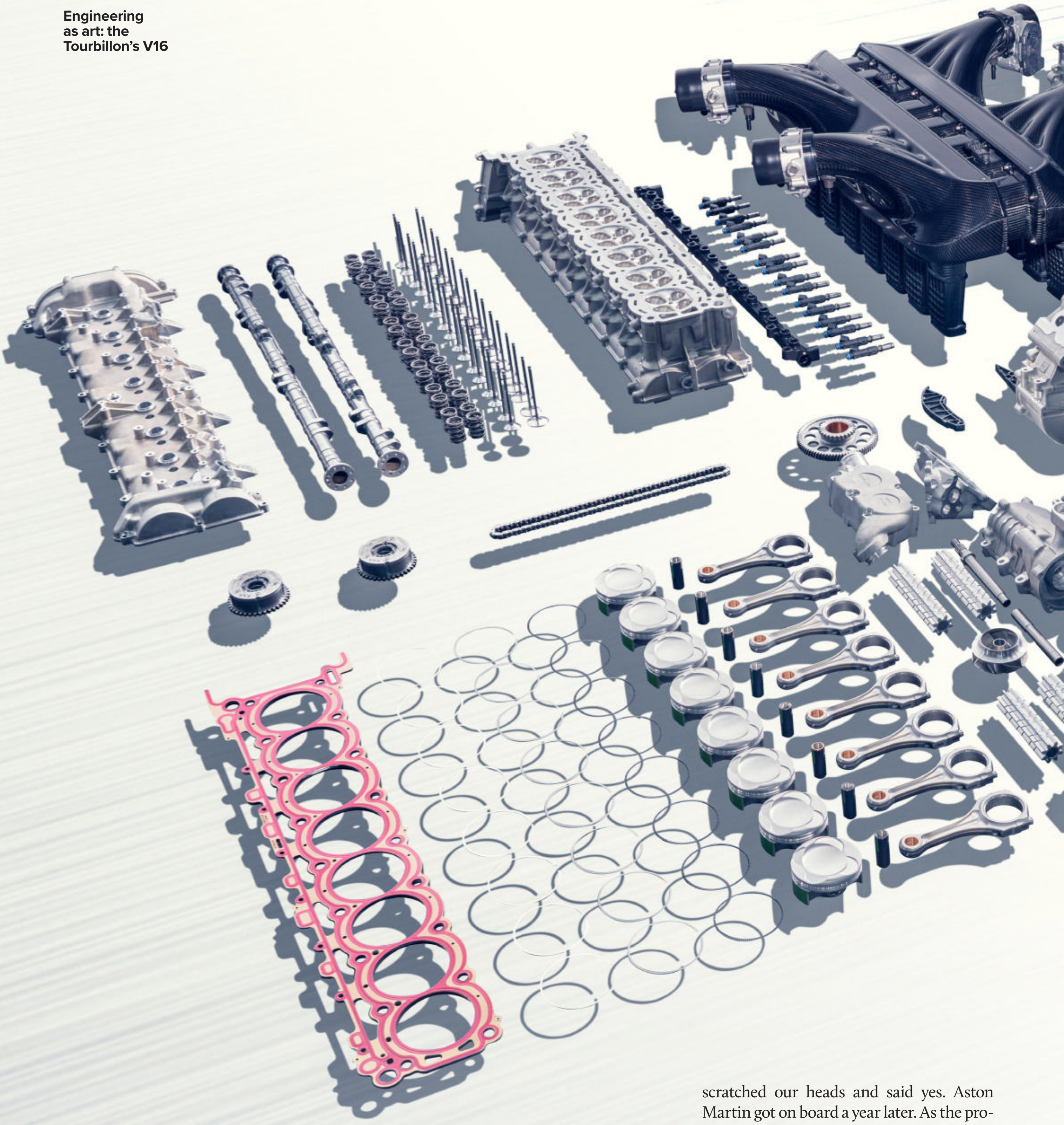
'We thought this was a great place for us to operate. It used every aspect of our business,' says Wood. 'But surely there wasn't an ongoing market for multi-million-pound limited-edition supercars using our engines, which certainly aren't cheap. Luckily, there was.'

The Valkyrie was step one. 'That was in 2015. Red Bull wanted to know whether it was feasible to make an 11,000rpm, 950bhp-plus V12 that was Euro 6 compliant. We ▶

THE LEAST EXPENSIVE CAR IT POWERS COSTS £1.8M PLUS TAXES, THE GORDON MURRAY AUTOMOTIVE T.33



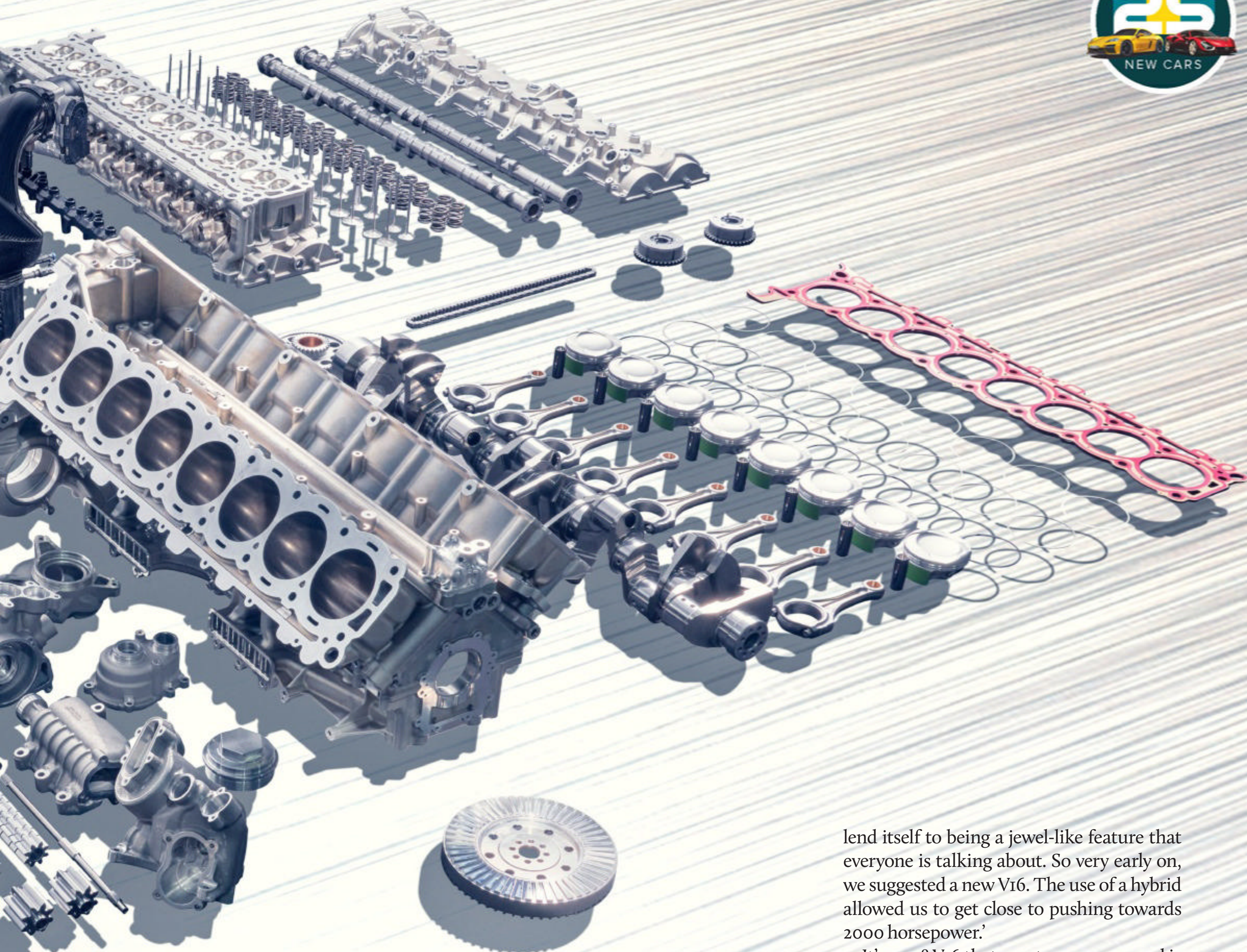
Engineering as art: the Tourbillon's V16



scratched our heads and said yes. Aston Martin got on board a year later. As the project progressed, we realised this was the perfect business model – designing, developing and making hypercar engines.' It was Cosworth's first clean-sheet V12, apart from a 1992 F1 motor that never made it to the starting grid.

Gordon Murray was next. He was after an engine supplier for his GMA T.50, a follow-up to his McLaren F1 (which used a bespoke BMW V12). The Cosworth V12 designed for Murray was totally different from the Valkyrie unit. Just as the Tourbillon is

IT'S A 90° V16 THAT REVS TO 9000RPM AND IS THE FIRST V16 FOR A ROAD CAR SINCE THE SHORT-LIVED CIZETA



all-new, and so is the upcoming RB17 V10. They all have Cosworth engines, but they're all unique. The only commonality to them all is the Cosworth expertise and craftsmanship.

'Adrian [Newey] was utterly focused on performance with the Valkyrie, encapsulated by all he'd learnt in decades of designing racing cars. Gordon wanted a usable ultra-high-performance road car. He also wanted to build a business.'

The Valkyrie's 6.5-litre hybrid-assisted engine would indeed give faster acceleration, a higher top speed and (almost certainly) a faster lap time. The GMA T.50's smaller 4.0-litre engine revved higher (12,100rpm – the highest revs ever for a road car) and was designed more for driving pleasure and responsiveness. There was no hybrid drive, which Murray detests. That the Valkyrie's engine was far more powerful (1139bhp vs 654bhp) would have pleased Newey and not bothered Murray in the least.

The Bugatti programme began with a phone call from Mate Rimac, now CEO of Bugatti Rimac but then known for running his eponymous electric-car company. 'I saw it was an overseas number – it turned out to be from Croatia – and I very nearly didn't answer. He said it was Mate Rimac and you may know me as the electric car guy. He said he wanted an engine and was about to take over Bugatti as CEO, which was then a secret. I remember thinking: "Can it really be true that a 33-year-old was about to take over Bugatti from the VW Group?" Then of course it turned out to be true.'

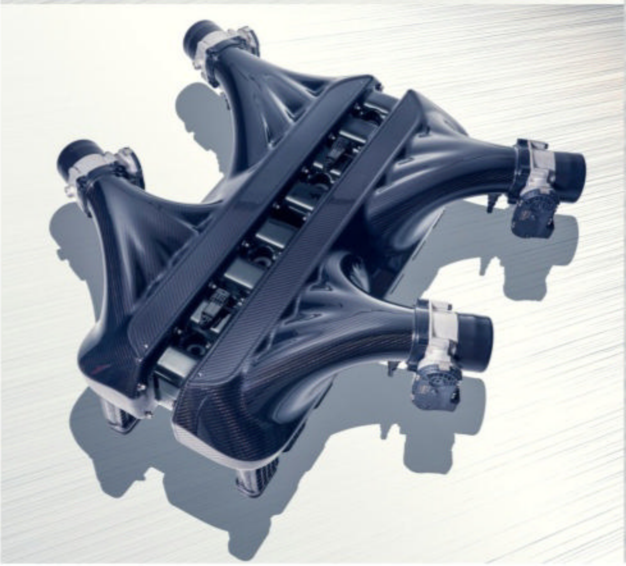
The original request was to take the existing W16, as used in the Veyron, Chiron and other recent Bugatti supercars, and make it naturally aspirated. 'The W16 had served Bugatti well but it didn't lend itself to high-revving normal aspiration. Nor did it lend itself to being a jewel-like feature that everyone is talking about. So very early on, we suggested a new V16. The use of a hybrid allowed us to get close to pushing towards 2000 horsepower.'

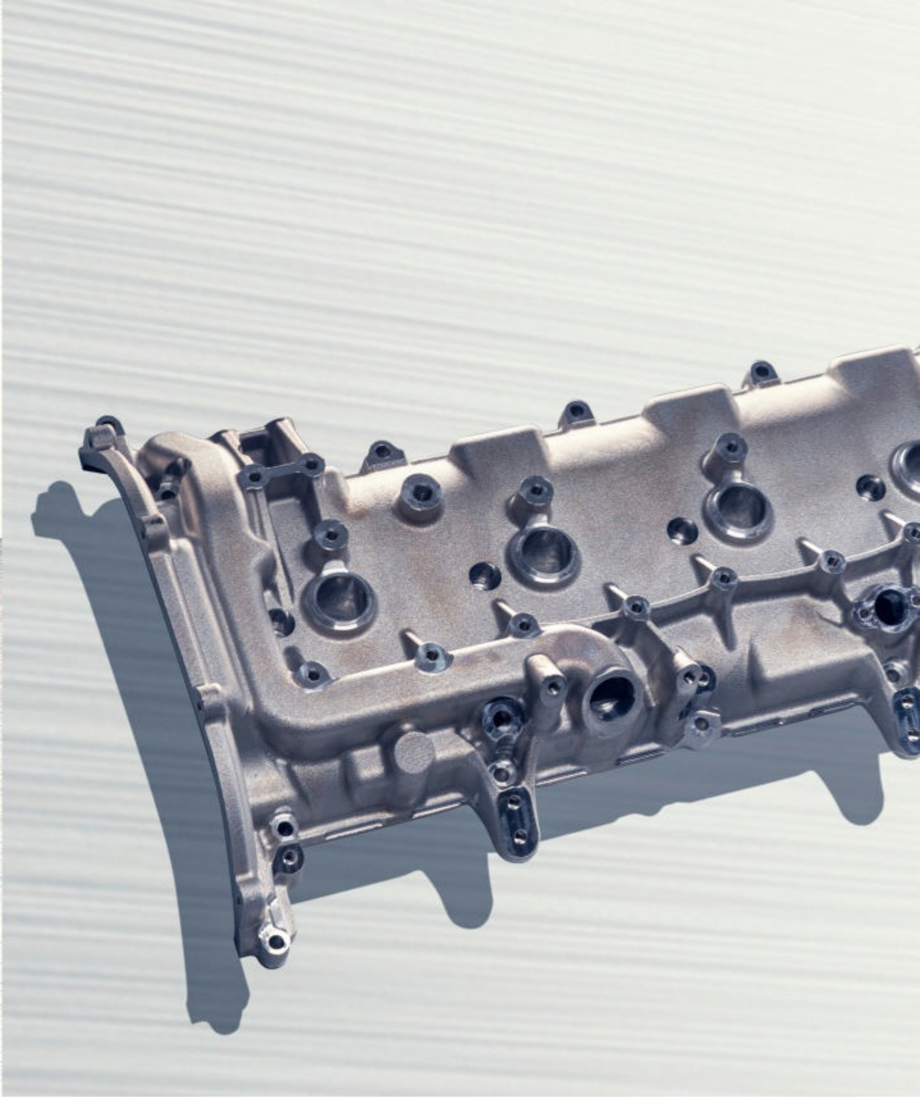
It's a 90° V16 that revs to 9000rpm and is the first V16 for a road car since the short-lived Cizeta supercar of 1991, the only production V16 since the Second World War. Pre-war there was the glorious 1930 Cadillac V16. In motor racing, there was the notoriously unreliable but fabulously tuneful BRM V16 of the early '50s, while in the '30s Auto Union used a supercharged V16. So the V16 is a rare format and, needless to say, a highly complicated and expensive one too.

'The sheer physical size of an 8.3-litre V16 created challenges,' says Wood. 'The length of the block and heads means there is very little room left on our machining tool. If it was an 8.5-litre, we couldn't have machined it. The length of the crankshaft and camshafts also means more twist. The use of chains to drive the camshafts gives more compliance.'

The higher-revving V12s of the Valkyrie and T.50 use gears – necessary when revs go much beyond 9000. As it is, at its 9000rpm maximum the timing chain on the Tourbillon is rotating at more than 100mph.

The V16 engine weighs 240kg. The smaller GMA T.50's engine weighs 178kg and is ▶





the world's lightest V12; the Valkyrie V12 is in the middle at 210kg.

There was also the complication of this high-revving 986bhp V16 masterpiece having to pass Euro 7 emissions, a further Cosworth responsibility – but not something that a glorious pedigree in motorsport prepares you for. Cosworth clearly learnt a lot from the Valkyrie and T.50, both of which comply with Euro 6 and US Federal limits. 'The challenge with all these engines isn't the performance. It's to mix performance and emissions and durability with driveability – so that the drivetrain feels as easy as a Golf.'

The engine note is also astonishing. 'The more cylinders and the more firing, the more incredible the noise. A V16 at 9000rpm sounds like a V8 at 18,000rpm,' according to Wood. Even at 'just' 7500rpm, there are 1000 individual explosions per second within the bowels of the V16. Expect a much richer bass than a frantic screaming V12.

The hybrid system is Bugatti's own. It adds a further 789bhp, producing an extraordinary combined 1775bhp.

Each engine takes nine months to build, partly because of the time to machine the crank from a solid billet of steel. This starts out at 164kg and is machined down to 22.6kg, with a tolerance of just 0.02mm, which is half the width of a human hair.

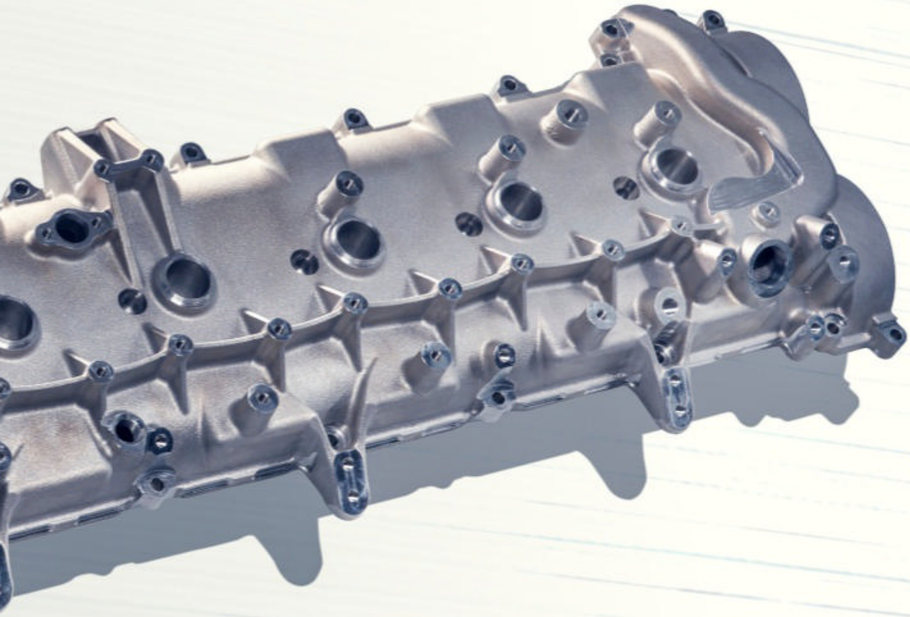
These Cosworth engines are all hand-built on the same production line, by the same 40 people. They go from project to project, Valkyrie to T.50 to Tourbillon then onto the RB17 (its engines are likely to be delivered from late 2026).

Other upcoming projects include the T.50s track car and the new GMA T.33 in both coupe and spider forms. There will doubtless be new versions of the Tourbillon, as is always the way with Bugatti.

'There are also new projects I can't talk about,' says Wood. 'In 2023 we made 170 engines, in 2024 similar and in 2025 it will be about 250. In 2026 it will be 300 and in '27 400. We can now see clearly to the next decade. Cosworth is now more successful than it's ever been.'

He is confident of the long-term future, despite all the EV noise. 'What we do has nothing to do with transport. These are wheeled luxury goods.' Carbon-neutral synthetic fuels will probably power them longer term. So, for small-volume luxury

> **'THE CHALLENGE WITH THESE ENGINES ISN'T PERFORMANCE; IT'S TO MIX THAT WITH EMISSIONS AND DURABILITY'**
>
> BRUCE WOOD



The size of some of the V16's parts stretches Cosworth close to its limits

hypercars, Bruce is confident the combustion engine will continue.

'Mate Rimac will admit it's hard to sell an electric hypercar. People buy hypercars for the experience. Gordon Murray will tell you the engine is 75 per cent of the car. It's part of the magic: the noise, the heat, and they look beautiful.'

To see how beautiful, we go to Cosworth's workshop, where disassembled Tourbillon V16 parts are neatly arranged, like a museum displaying historical artefacts – except the machining is much more accurate. The massive and exquisite lacquered carbon plenum is both the engine's crown and its spine: the central display as you peer into the rear of the Tourbillon. Note its 16 fingers from the four big intakes, to make it clear it's a 16-cylinder car.

The crank and cams are astonishingly long, and exquisitely finished: artistic sculptures as much as engine components. Valve actuation is by lovely little solid finger followers, mounted on shafts that look like kebab skewers. They are machined from a solid billet and diamond-like coated. Valves are titanium, from the same supplier which serves the F1 teams, and are astonishingly light, at just 28g for each of the intake valves. Conrods are also from an F1 supplier. At 9000rpm, the Cosworth-made pistons they're attached to move at 23.6 metres per second (or 53mph).

We see a disassembled durability-test engine, its components slightly blackened but still with plenty of life. It's just completed the equivalent of 60,000km (37,000 miles) on the dyno. I was once told that the average Bugatti is driven just 300 miles a year, so the likelihood of any owner ever doing that distance is remote.

Says Bruce: 'Of course, the irony is that, just as no Tourbillon customer will do 60,000km, so no one is going to use the best part of 2000 horsepower. If you do, you'd be going over 270mph and in the next county.'

Cosworth's newfound status as preferred engine supplier to hypercar makers has now, in a curious twist, seen it come full circle. Wood explains: 'We now make racing engines again [for] the first time in a decade.' They're for the Aston Martin Valkyrie AMR-LMH, due to make its competition debut in Qatar in February, a world away from the industrial scrubland of middle England where it all began.

TOURBILLON

THE THIRD CHAPTER

Finally, a new Bugatti I like. The Veyron, the Chiron and the others all left me cold. We can admire the engineering to take a car beyond 250mph and an internal-combustion engine well beyond 1000 horsepower. But these are just cold figures, mere mathematics. I prefer feel. Give me a car with a heart.

The Tourbillon has one, and it's an exquisitely engineered V16, all new and crafted by those masters of mechanical magic at Cosworth. The outgoing W16 was an engine of great force but no finesse. The technology was related to the VW VR6 and W8, its breathing boosted by four turbochargers. But as with any engine that relies on hurricane levels of turbo boost, responsiveness was poor.

No one ever bought a VW-era Bugatti for its engine (although they certainly did with pre-war Bugattis).

So the Tourbillon is a different sort of Bugatti, and very likely will offer a superior driving experience. Yet it still has all the numbers to make any billionaire smile. Its hybrid assistance and three electric motors boost total power to an astonishing (and utterly unusable) 1775bhp. Incredible, if meaningless.

And totally impractical. But there's a tangible benefit: an engineering jewel, beautiful to the eye, that provides more theatre, more response, more emotion, more music, more of a tale to tell (and storytelling is important for supercars). How ironic that it took Mate Rimac, an electric-car pioneer, to realise that what Bugatti most needed was a better combustion engine.

NEED TO KNOW **What is it?** The car to redefine speed | **Tech** Three e-motors and the V16 will dominate it | **Aimed at?** Everyone, from billionaires to kids with bedroom posters | **When can I have one?** Production begins in late 2025

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■ PORSCHE GT3RS ■

GREEN HELLRAISER

GT3 RS not fast enough for you? Then you need the Porsche-endorsed Manthey upgrade

Words Ben Barry

For two decades, the Porsche 911 GT3 RS has been the closest thing to a 911 racer with number plates. Now Manthey Racing is narrowing the gap with a Porsche-approved upgrade to make even the 992-gen GT3 RS look positively restrained – not to mention a little tardy.

Aerodynamic, chassis and braking performance has been fettled over two years and thousands of miles in what Porsche describes as close collaboration between its own Weissach development centre and Manthey in Meuspath, next door to the Nürburgring. So if you plan to actually use your RS on track rather than mothball it as an investment – and have almost six figures going spare – a Manthey upgrade is probably the way to go.

Founded in 1996 by racer Olaf Manthey and now managed by brothers Nicki and Martin Raeder, the eponymous track-preparation specialists have quite some currency when it comes to go-faster GT3s.

Manthey won the Le Mans GT class on both its debut and that of the first GT3 R in 1999, and has taken victory at the Nürburgring 24 Hours a record seven times. It also successfully ran Porsche's factory GT cars in the World Endurance Championship from 2013 to 2022, and races to this day.

Porsche acquired a 51 per cent stake in the business in 2013, and for the last few years Manthey has also been developing more track-focused packages for modern Porsche GT road cars, the last-gen GT3 RS and GT2 RS included. The new 992.1 GT3 RS follows a similar formula.

Visual changes certainly turn heads, but the focus is on reducing weight, improving cooling and – most important – unlocking maximum aerodynamic performance.

Most obvious are more slippery carbonfibre 'aerodisc' rear wheel covers and a carbonfibre rear panel some 25 per cent lighter (and 100 per cent less see-through) than glass. It comes with an integrated shark fin like the one that inspired it – the one on the 963 Le Mans prototype racer – and it helps with mid-corner stability.

There are also six extra roof fins, larger end plates for the swan-neck rear wing, a wider rear diffuser and – up front – a revised front splitter, new dive planes and wheelarch Gurney flaps.

The Manthey RS has the figures to back up the visuals – Porsche claims over 1000kg of downforce at 178mph with no drag penalty, up 140kg over standard.

Given the potential forces acting on the GT3 RS's suspension, it's no wonder Manthey has increased spring rates 30 per cent on the front and 15 per cent rear – besides, the standard car rides superbly on the road, so there's plenty of headroom to dial that up for the track.

There are new shocks that, like the standard GT3 RS, feature independent compression and rebound control via two separate

MANTHEY HAS THE FIGURES TO BACK UP THE VISUALS – OVER 1000KG OF DOWNFORCE AT 178MPH

■

valves adjustable via the steering wheel, plus there's a new electronic brain to handle data from the seven accelerometers (one per wheel and three on the body).

GT3 RS models fitted with optional carbon-ceramic brakes are also offered with track-optimised pads – if that sounds like code for compromise, Porsche claims consistent performance across a wide temperature range and long life for both pads and discs. Even with stock stoppers, steel-sheathed brake pipes reduce flex and provide better pedal feel and response.

Benefits should be felt throughout a lap, but mid-speed stuff is key, where downforce still has a beneficially squishy effect but where a car is more likely to be flicked through comparatively tight turns or subject to harder squeezes on the brakes than in quick steady-state turns.

As former factory driver and current development driver Jörg Bergmeister explains: 'The car dives, pitches and rolls even less, offering a much more stable aerodynamic platform. The high contact pressure therefore remains very constant under all driving conditions.'

There are no changes to either the 4.0-litre naturally aspirated flat-six engine – still with 518bhp and 343lb ft and capable of a screaming 9000rpm – or the seven-speed PDK transmission that spits through changes.

Wheel and tyre sizes are also unchanged (still 20 front, 21 for the rear), and there's a choice of Michelin Cup 2 or Cup 2 R or Pirelli Corsa or Trofeo RS tyres.

Manthey hasn't released a Nürburgring time yet due to poor weather, but expect a 'significant improvement' over the 6min 49.328sec the Berg master himself set in a stock RS. Manthey's previous benchmarks with its GT2 RS and GT3 RS upgrades suggest the gain could be as high as five seconds or more around the 12.9-mile lap.

The Manthey kit will be offered and fitted through most of Porsche's UK network from March, either for new cars post-purchase or used examples, and it doesn't affect the warranty.

This is great news, because it will also cost £99,999 including VAT before fitting, which equates to 50 per cent or so of the cost of an RS with the Weissach package.

For that you can expect one of the best road-legal track cars money can buy – and a target on your back at every trackday. **car**

NEED TO KNOW **What is it?** The most track-focused 911 made more track-focused | **Tech?** Big aero; tweaked chassis; sharper, stronger brakes | **Aimed at?** Insatiable and rich RS track addicts | **When can I have one?** March

MANTHEY
MICHELIN
PORSCHE

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MERCEDES CLA

A TRUE BABY S-CLASS

Petrol and electric CLA is the first of four small Mercs promising big-car luxury, tech, pace and refinement – but not the cost. By **Jake Groves**

SO LONG, A-CLASS

Soon to be the smallest car in the Mercedes line-up, the new CLA will have design details from the Concept CLA, improved interior quality and the new MB.OS brain powering its software. A CLA shooting brake, GLA and GLB will all share the engineering.

NEXT-LEVEL EV TECHNOLOGY

Mercedes is making big claims for its new MMA (Mercedes Modular Architecture) underpinnings. EV versions have 800-volt electronics for a 10-minute charge that could add 186 miles of range, and a two-speed transmission on the rear motor for motorway efficiency.

YOUR PICK OF THE PACKS

A 58kWh lithium iron phosphate battery with around 300 miles of range keeps costs down, while an 85kWh nickel manganese cobalt pack claims 466. Single-motor versions have 268bhp; fitting a front e-motor adds 107bhp and 4Matic traction.

CLEAN, BUT NOT A PHEV

MMA also has a non-plug-in hybrid promising 'diesel-level fuel efficiency', according to engineer Karsten Krebs. An all-new 1.5-litre four-cylinder engine is mated to an e-motor and eight-speed 'e-DCT', with three outputs: 134bhp, 161bhp and 188bhp.

NEED TO KNOW

What is it? Mercedes' new small saloon with big-car details | **Tech?** Long-range EV, newly-developed hybrid, next-gen interior tech | **Aimed at?** S-Class dreamers with smaller budgets | **When can I have one?** Mid-2025

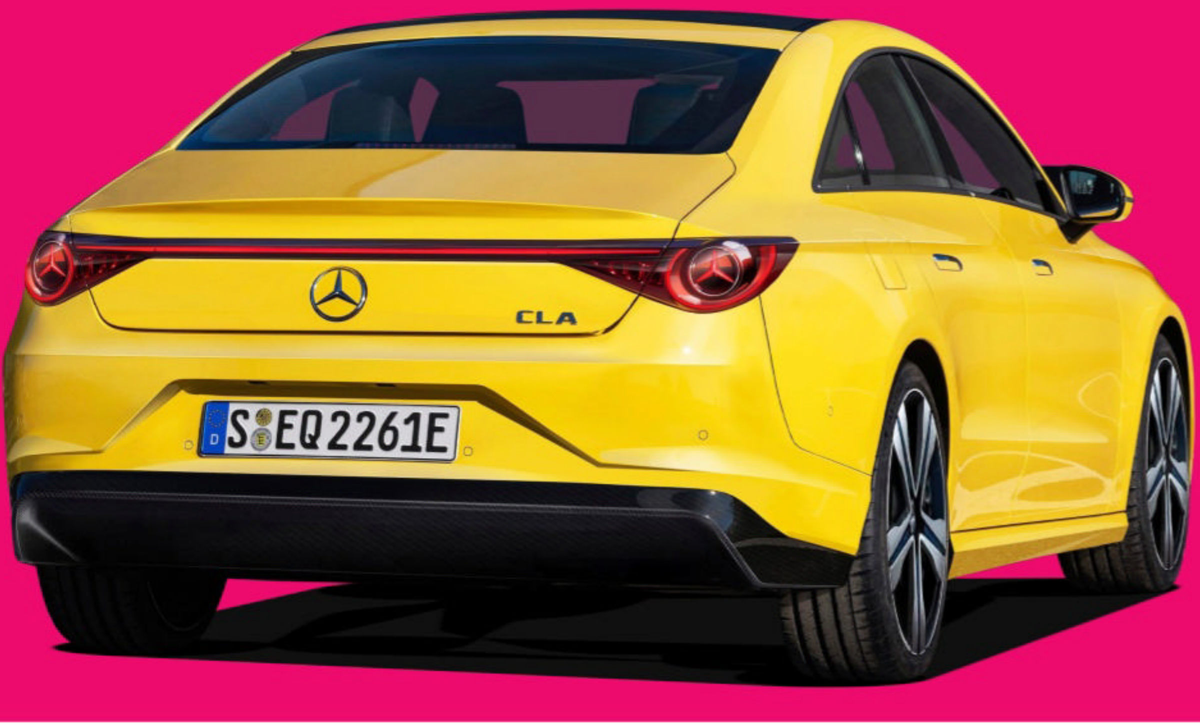

Illustration: Lars Sältzer

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PUMA GEN-E

STEALTHY CAT

Top seller goes electric

The Puma Gen-E is essentially a facelifted Puma with a battery-electric powertrain. Visually it has fewer creases than the continuing combustion version, but the real change is under the skin, where the engineers have been busy crowbarring batteries into a platform not entirely intended for EVs. There's just the one powertrain, which Ford claims will do a resolutely average 234 miles on a charge.

NEED TO KNOW **What is it?** Big-seller's all-electric twin | **Tech?** Button-light cabin, aero design details, 145-litre GigaBox – a bigger version of the combustion car's MegaBox under the boot floor | **Aimed at?** Puma drivers with a plug | **When can I have one?** Early 2025

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POLESTAR 5

STREAMLINER

Scandi Taycan rival

Does the world need another Porsche Taycan rival? Maybe, if it's as good as the new Polestar 5 promises to be. While the 3 and 4 are designed to be big sellers, the 5 is more of a grandiose flagship for Polestar's growing range, tackling the Porsche as well as the Lotus Emeya and Audi e-Tron GT. Expect up to 872bhp and 663lb ft, quick charging and a bonded aluminium platform.

NEED TO KNOW **What is it?** Polestar's rival for the mighty Porsche Taycan | **Tech?** 800-volt electrics for fast charging, streamliner looks, flax-seed interior, new Polestar-only platform | **Aimed at?** Upmarket EV buyers who don't want an SUV | **When can I have one?** Late '25

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JEEP RECON

MUD AND VOLTS

Silently into the wilderness

The more rugged half of a pair of big electric Jeeps coming soon. Where the Wagoneer S favours luxury, the Recon is closer to an electric Wrangler. Built on the STLA Large architecture – which can adapt to combustion powertrains – both will have all-wheel drive and extreme power outputs. Jeep insists it will be a proper 4x4, with something approaching Wrangler levels of ability

NEED TO KNOW **What is it?** Electric equivalent to the Wrangler | **Tech?** Versatile STLA Large platform, precision-controllable four-wheel drive | **Aimed at?** Wrangler, Bronco and G-Class buyers ready for EV | **When can I have one?** Expect an Easter reveal

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ALPINE A390

THE HERETIC

SUV with *joie de vivre*

Alpine making a tall, heavy, electric five-seater? Sacrilege! But the Renault sub-brand can't rely on the A110 for ever, hence the Renault 5-based A290, and then this. Best-case scenario: it does for Alpine what the Macan did for Porsche, bringing in the cash so it can carry on making sports cars. CEO Philippe Krief acknowledges it won't be light, but is confident his engineers can make it feel suitably sporty.

NEED TO KNOW **What is it?** Alpine's accountant-satisfying electric SUV | **Tech?** Tri-motor option, 'engineered lightness', fastback crossover shape | **Aimed at?** Allowing Alpine to flourish beyond sports cars | **When can I have one?** Towards the end of the year

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■ HYUNDAI IONIQ 9 ■

THE SPACE CRUSADER

Hyundai's next EV is huge on the inside, weird on the outside, and coming for you and your kids

Words Jake Groves **Photography** Alex Tapley and Hyundai

Close to the dust-ridden town of Mojave, a camouflaged car that looks like a newly landed spaceship is looping a perfect oval of wide tarmac… and we're at the wheel. This isn't Roswell 2.0 – it's a prototype of Hyundai's new Ioniq 9, being put through the wringer at the Korean car maker's enormous proving ground on the edge of the Californian desert.

It's an all-electric SUV that's longer than a full-size Range Rover, and has the longest wheelbase of any previous Hyundai car.

The day before our visit to the proving ground, we spend time in a studio analysing the Ioniq 9 under a microscope. There are naturally plenty of design details meant to link it to the rest of the Ioniq range. Simon Loasby, head of Hyundai's design centre, talks of chess pieces and how they belong to the same family, but have unique details. With the Ioniq 9, you can still see the familiar 'parametric pixel' lights front and rear seen on other Ioniqs, but the big SUV also has drawn design inspiration from things like yachts. It first saw the light of day as the Seven concept.

Loasby tells us: 'Usability was the main thing we wanted to carry across, as well as the practicality of the space and the efficiency of how the car moves through the air. We could have gone quite boxy and given a daunting impression to the car, but we already have Palisade and Santa Fe – we don't necessarily need everything in that boxy camp.'

He points to the rounded front end and raked windscreen, both designed to cut through the air better and look less intimidating to other road users. The result is a reasonably slippery drag co-efficient of 0.269, or 0.259 with the optional camera mirrors.

The interior is typical modern Hyundai, with plenty of recycled materials and interesting colours – and packed with neat solutions for family road trips. Nestled ▶

Hyundai's designers are not afraid to split the jury

Avoiding tumbleweed is a challenge

between the front seats is the Universal Island 2.0 – a large storage area that can slide fore and aft, even as far back as the second row. It hosts wireless chargers and climate controls for the rear occupants, and is topped by a lid/armrest that can be opened both ways. The cabin also contains a UV sanitisation station for phones and other devices. Extra functions can be purchased and downloaded after you've bought the car.

Utilising the E-GMP platform's flat floor allows loads of flexibility in the second and third rows. Like the related Kia EV9, the Hyundai Ioniq 9 can be had with a conventional seven-seat configuration or three rows of two seats, featuring captain's chairs in the second row, including Hyundai's 'relaxation seat' tech that massages you and allows you to recline close to horizontal. They also swivel, allowing for easy entry and exit, and turn through 180° to sit face-to-face with those in the third row when the car's stationary. Tall adults can get in and out of all three rows with ease, and sit comfortably. The boot is enormous, too.

IT'S A CAR AIMED PRIMARILY AT FAMILIES WHO TAKE LONG TRIPS, SO THE SUSPENSION IS SOFT TO SOAK UP THE RUTS

All Ioniq models benefit from a huge 110.3kWh battery, 800-volt electrics allowing up to 350kW charging speeds and Hyundai's pioneering vehicle-to-load tech that enables external devices to be powered from the car.

The Ioniq 9 runs a conventional multi-link suspension system front and rear – no air springs here, or rear-wheel steering for that matter – but the rear features self-levelling dampers. Euro-spec Ioniq 9 models can tow up to 2500kg.

Hyundai says three self-explanatory variants of the Ioniq 9 will launch initially: a Long Range RWD, Long Range AWD and a Performance AWD flagship. While the 9 hasn't been fully homologated yet, Hyundai is targeting 385 miles of e-range from the base model.

Hyundai's proving ground has a huge mock US highway – complete with potholes, road repairs and bridge expansion joints. Hyundai engineers are keen to stress that it's a car aimed primarily at families who take long trips, and viewed in that light it all makes sense. The suspension set-up is soft, soaking up the ruts. The large wheels still highlight imperfections with gentle jolts, but they don't feel too intrusive – and it's a marked improvement compared to a jittery Kia EV9 GT-Line, for example.

Noise reduction in the cabin has also been a priority, with active noise-cancelling and triple-glazed glass helping to insulate you from the outside world. Tyre noise is well damped, but wind noise is audible (on, admittedly, a very blustery day in the desert); it should be quieter on Ioniq 9s fitted with the more aerodynamic camera mirrors.

After a few laps, we exit the fake highway and head towards the proving ground's fake typical US country road.

That soft suspension set-up quickly makes itself known in different ways as we

Pick two or three seats in row two

tackle some corners and hairpins with perhaps untypical vigour. Here the Ioniq 9 proves to be rather roly-poly, despite the best efforts of the software Hyundai calls the Chassis Domain Control unit, designed to keep the car balanced by co-ordinating torque vectoring and other control systems.

It's here we also notice some other traits; namely the very relaxed steering. Again, the Ioniq 9 is a cruiser, not a bruiser, but there's a marked dead-spot at the centre allowing you to waggle the wheel considerably before any serious steering input is required. Fine for long-distance highway drives, but it means the Ioniq 9 feels a little soggy darting around corners. It's a prototype, mind, so this may improve come production.

Our Performance-spec prototype, with twin motors developing 430bhp and good for a 5.2sec 0-62mph sprint, is brisk enough, but you suspect the entry-level Long Range RWD will seem a little ponderous.

Interestingly, under hard acceleration, it feels as if the software is reining in the initial electric acceleration; there's a small shove of power when you press the throttle hard, then more power is fed in a second or two later. That said, you can have a bit of fun with the 9 even with the traction control on; boot it hard into a corner and it really does grip – there's very little understeer even when you're being a tool. Poke it very hard and the tail will step out… not something those in the third row are likely to be too happy about.

So will a full-fat N model follow? Don't count on it. 'Maybe for some of our cars it's not as appropriate as others, but we feel our brand can stretch that far,' says Loasby. 'I think the progression for N will be to tap into more sophistication with the performance, and here we have a car that is already super sophisticated.'

But would that matter? If the Ioniq 9 is all about space and grace, pace feels little more than a bonus. **car**

NEED TO KNOW **What is it?** Hyundai's biggest Ioniq | **Tech?** Optional second-row massaging recliners, enormous battery, lawnmower-powering V2L tech | **Aimed at?** The big, road-tripping, planet-conscious family | **When can I have one?** Launches in the summer

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■ TESLA MODEL Y ■

BEST SELLER MADE BETTER

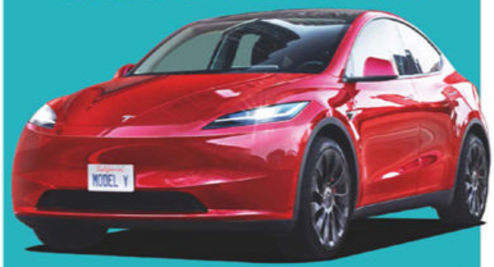


Illustration Lars Sältzer

The Tesla Model Y is already a convincing package: it's the right size and right shape for EV buyers, and brings myriad benefits including efficient e-motors, a long range and access to a very good charging network. But it's now five years old, and the competition is catching up.

Enter Juniper – the codename for the upcoming Model Y facelift that's designed to echo the Model 3's Highland update. The visual differences will be slight, with new shallow headlights like the Model 3 and a full-width lightbar at the rear.

The more important changes will be a raft of interior quality improvements including better dashboard materials and an even cleaner centre console. There could also be hardware changes ready to deliver on Tesla's intention to make 'unsupervised full self-driving' available in 2025.

Like Model 3 Highland, expect a base rear-drive model designed to keep the price reasonable, plus bigger-batteried rear- and all-wheel-drive models. Seven seats will be available. The flagship will be a Performance model that's had a thorough going-over with chassis upgrades, adaptive dampers and bespoke interior details.

NEED TO KNOW **What is it?** Tesla's improved cash cow | **Tech?** Huge overhaul of interior quality, less-jittery suspension, seven-seat option | **Aimed at?** Bettering a global best seller | **When can I have one?** Shouldn't be too long

10

ALFA ROMEO 33 STRADALE

ALFA RISING

Jean-Philippe Imparato has revitalised Alfa Romeo. As he moves on, can it maintain the momentum – and deliver a supercar for the ages?

Words Piers Ward

BRIDGESTONE
Romeo
ALFA ROMEO

For the past three and a half years, Alfa Romeo has flourished. This is not normal. Owner Stellantis knew it was taking on a basket case. Departing Stellantis boss Carlos Tavares admits Alfa was running up huge debts when the merger deal was done in 2021. It almost put him off.

Things are different now. Alfa has been on a consistent upward trajectory with both growth and quality, two previously unfamiliar words. The reason? Jean-Philippe Imparato. Until recently Alfa's CEO, he's now the group's chief operating officer for enlarged Europe. The man who saved the brand? That's not a million miles from the truth. It's thanks to him that the Italian firm is all set to enjoy a successful 2025, rolling into the year with a range that should keep both the accountants and the Alfisti happy.

Key to this success has been a clarity of vision. 'Italian, red, sportiness' is his definition of the brand. He claims: 'Everybody knows Alfa Romeo stands for this.'

For JPI, it all started back in 2021 and a bold decision: the Junior, the first electric Alfa Romeo. (One other decision, calling the car Milano, backfired spectacularly and led to a very public spat with the Italian government…) 'We could have redone the Stelvio but no, we had to deliver a premium and affordable proposal.'

It had to be electric and it had to be competitively priced. 'We needed a volume maker, something that will sustain the P&L of the brand and the network.' He's convinced the Junior will support Alfa Romeo in a 'global, shaky period', and so far the signs are encouraging.

He's consistent in his praise of the Stellantis group and the economies of scale it brings – he talks of 'Stellantis's fantastic technological basket'. But he's also well aware that Alfa is not the sort of brand that will weather a sustained parts-bin assault. Its cars must be characterful and individual. The Junior has managed that trick, at least in Veloce trim, thanks to a limited-slip diff and enough bespoke interior touches to ensure it doesn't feel like an Italian Jeep Avenger. It's a prime example of JPI's desire for Alfa's cars 'to find the best compromise between having fun and being useful'.

The next Giulia saloon will need to do the same. JPI told Tavares that he wants Alfa to be 'the champions of road handling', and that the Giulia must be beautiful. Having signed the design off in early 2024, JPI is effusive in his praise: 'It is super. I love the car.'

Getting it right wasn't easy. Imparato explains that the team has been working on it for three years. 'If you want to have some kind of continuity of the previous Giulia [and] bring modernity to it, plus electrification, plus software … oof, *bon courage*… we ▶

> TONALE'S SUCCESS HAS ALLOWED ALFA TO DO HALO STUFF LIKE THE 33 STRADALE SUPERCAR

have been working on all that.'

Alfa has managed a lot of this in the past, creating beautiful cars that drive well. But the build quality and sales have never matched the handling flair. JPI has tackled the quality issues head on, and has seen the improvement acknowledged by owner surveys. Imparato knows the days when shoddy finish could be excused as 'character' are no more. He says: 'My father was in love with Alfa Romeo: "I love this car because the engine is super cool. But the quality is shitty," he told me.'

The Tonale was the first car subjected to JPI's quality crusade. He held up an entire boat-load of cars until he was happy with the fit and finish. It had to be right. 'In one year, Tonale has become 60 per cent of Alfa's sales.' That's created solid financial foundations on which to build. 'Everybody talks about a super coupe but 90 per cent [of customers] buy a crossover,' he explains. He also claims that, as of the end of 2023, Alfa was the fastest-growing premium brand. Tonale has driven much of that growth, though the overall numbers remain modest.

Such success has allowed Alfa to do the halo stuff like the 33 Stradale, to 'leverage the enormous value of the brand'. The 33 is due with customers in 2025, powered by their choice of twin-turbo 3.0-litre V6 pushing out 620bhp or an electric powertrain with 740bhp.

More glamour will follow. 'These kind of clients always want a sequence. They don't want a one-shot marketing exercise. So we will decide how many cars [in the future] but always below 50.' Even if he's not in direct control now – Santo Ficili is the new CEO – you get the feeling Alfa is so close to JPI's heart that he won't ever let go completely.

Previously, the brand felt like the great British pub: how could people make a hash of what should be the easiest job in the world? Serve good beer, be charming to your customers; build beautiful cars, make them work. From the outside, it doesn't look that difficult.

Now, Alfa Romeo feels pretty secure, with the right mix of attainability, desirability and heritage to fight off all-comers, even China. JPI knows he can't compete with the scale and tech of those companies: 'I would probably always find the Chinese of the world will add a bit of software that I don't have.' But Alfa can inject more character, more dynamic flair, more panache. 'The final touch of each Alfa is made at Balocco [Alfa's development centre] by the team who made the [Giulia] GTA.'

Of course, this being Alfa Romeo and this being our rapidly changing world in which nothing appears certain, it may all come crashing down. But the mix feels right. It feels Italian, red and sporty. **car**

ALFA'S OTHER BANKER

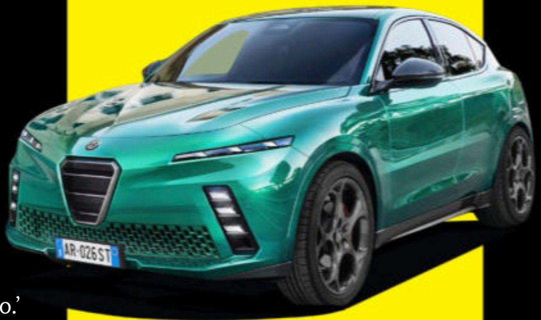


Illustration: Lars Sältzer

A new Stelvio is both a big risk and a big opportunity. So it's not surprising Alfa is hedging its powertrain bets – this will be the first European car to ride on the new STLA Large platform, a new layout that's flexible enough to accommodate both combustion engines and EV powertrains.

STLA Large is the same platform being used in the US in the Jeep Wagoneer S and Dodge Charger, with a combination of big power and long range. That's very much the aim for the electric Stelvio too, with 400 miles on a charge a realistic expectation.

Engines? They'll be hybrid to varying degrees, with the powertrain mix flexed depending on market conditions. The combustion versions will be petrol, not diesel.

It'll be interesting to see what happens to the hot Quadrifoglio version of the Stelvio. The European boss of Stellantis, Jean-Philippe Imparato, has said the next Giulia, based around the same STLA Large platform, will have '1000hp' in its hottest form. If that carries through to the Stelvio, the car will be a real monster.

NEED TO KNOW **What is it?** Alfa's all-new mid-sized SUV | **Tech?** Plenty. STLA Brain is a group-wide operating system that should stop Alfa electrics being so, erm, characterful | **Aimed at?** Reassuring people that a Stellantis-era Alfa is still an Alfa | **When can I have one?** It'll be unveiled in April 2025; sales start late 2025

NEED TO KNOW **What is it?** The 33 is Alfa's ultra-exclusive supercar | **Tech?** Carbon-tubbed, with a 3.0-litre V6 or EV powertrain. Both will do 0-62mph in under 3.0sec | **Aimed at?** Not many people – just 33 will be made, and they're all spoken for | **When can I have one?** Customer deliveries start in 2025

9

■ JAGUAR GT ■

FROM SCRATCH

Heritage, shmeritage

Spearheading new Jaguar is the Type 00 concept, which previews a four-door battery-electric production GT currently at the prototype testing phase. A coupe and SUV will follow, all on the new JEA (Jaguar Electric Architecture) platform, with a claimed range beyond 400 miles and well in excess of 600bhp. Why the long bonnet, on a car with no engine? Jaguar's answer: because we can.

NEED TO KNOW **What is it?** The first car of Jaguar's new era | **Tech?** In-house e-motors, grand tourer proportions, big battery pack | **Aimed at?** The fashion-conscious Mayfair/Paris/Milan/LA/Tokyo/Shanghai set | **When can I have one?** Very late in 2025/early 2026

8

■ OCTA ■

'ROID ROVER

Coming through!

Range Rover roams well into Bentley and Rolls territory with its special editions, and now Defender is heading the same way. The Defender Octa takes the Range Rover Sport SV's bewilderingly trick suspension (no archaic anti-roll bars, 6D adaptive dampers) and calibrates it for boulder fields rather than Brands Hatch. Serious power, too: 626bhp and 553lb ft, with 590lb ft in launch mode.

NEED TO KNOW **What is it?** The ultimate Defender | **Tech?** Do-anything suspension, increased ground clearance and beefy bodywork, 33-inch all-terrain tyres | **Aimed at?** Conquering the Mojave *and* Hollywood | **When can I have one?** Early 2025, priced from £145k

7

■ MCLAREN W1 ■

THE ONE, V3.0

Wo-king of the track

F1, P1 and now this. We're still getting over the cringe factor involved in the name; boss Michael Leiters says the 'W' is a nod to McLaren's 'world championship-winning mindset' – yuck. But this is a serious car designed to move the game on from the halcyon P1. All 1258bhp is sent to the rear wheels via an electrified V8, with new-generation carbonfibre tub that features integrated seating to save weight.

NEED TO KNOW **What is it?** McLaren's P1 successor | **Tech?** Wild, race-mode aerodynamics, 3D-printed suspension components, hybrid V8 power | **Aimed at?** Showing the Senna a clean pair of heels | **When can I have one?** You can't: all sold

6

■ RANGIE EV ■

4x4 x ELECTRIC

Land Rover goes BEV

Will the first all-electric Range Rover look any different to the existing car? No. But the tech underneath is all JLR-developed, with 800-volt electrics, and bespoke drive units (housing the e-motor, transmission and power electronics in one) holding the key to impressive range and efficiency claims. The car will be built on the same production line as the rest of the Range Rover line-up.

NEED TO KNOW **What is it?** The 'quietest, most refined Range Rover' ever | **Tech?** Space-efficient e-motors, 800-volt architecture, same MLA platform as regular Rangie | **Aimed at?** Classy urbanites with a conscience (ish) | **When can I have one?** It's expected early 2025

5

KIA EV3 & HYUNDAI INSTER

EV MADE EASY

Korea’s new wave of EVs, starring Kia’s EV3 and the £23k Hyundai Inster, have 2025 at their feet. We drive them

Words Ben Whitworth **Photography** Lee Brimble

It's well after midnight. Seoul is a sprawling and sweating 8000-square-mile sauna. Despite the energy-sapping combination of 35°C heat and 95 per cent humidity, the Gangnam district is absolutely heaving. People pour in and out of brightly illuminated cafes, bars, photobooth shops and barbecue houses, their hands full of phones, cigarettes and mini fans. They swarm across Gangnam's tight grid of roads and alleys with scant regard for the cars, scooters and e-bikes that deftly weave through and around them. The shimmering lights, the pulsing K-pop soundtrack, the aromas of grilled steak, perfume, beer and smoke, the gritty back-of-your-throat taste of hot urban concrete – welcome to the world's most dynamic city.

I slip silently past Gangnam's saturated late-night revellers, relaxing in the icy air pouring out of the Kia EV3's air vents and the wonderfully comfortable chilled seat. Heading north through the Korean capital's 24/7 traffic, I cross the Han river and then peel west for Hyundai's design centre in Goyang to collect the electric-only Inster, Hyundai's new urban car. Two very different cars from two brands on fire. They're chasing different customers. But both favour a fusion of class-leading battery technology and jaw-on-the-floor design.

They're buoyed along by hallyu, Korea's cultural wave spearheaded by musical phenomena like BTS, NewJeans and Blackpink, the television sensations *Squid Game* and *All of Us Are Dead*, and Oscar-winners *Parasite* and *Minari*. And both marques are rocketing into the future fuelled by the confidence that comes from stealing buyers from their American, European and Japanese rivals.

The new EV3 will be a keystone model in Kia's continued success. The EV6 and EV9 boldly signalled Kia's design- and technology-led approach to the EV sector, but they're high-value halo models. Against a backdrop of quickly cooling EV ardour, not helped by high prices, it's the smaller and more affordable EV3 that's tasked with racking up the big global sales.

Tough gig, but it steps onto the stage with everything going for it – an attractive £32,995 start price, family-friendly functionality wrapped in dramatically futuristic styling, and class-leading battery and charging tech. That pricing undercuts direct rivals from VW, Volvo, Cupra and Jeep. Buyers have the choice of three trim levels (Air, GT-Line and GT-Line S) and two battery packs (58.3kWh Standard Range and 81.4kWh Long Range) for respective WLTP ranges of 267 and 372 miles. Both versions power a single motor that drives the front wheels and is good for 201bhp and 209lb ft of torque. Vehicle-to-load and vehicle-to-grid functionality is standard, as is 400-volt architecture – down from the 800 volts on the EV6 and EV9 to cap costs – for 102kW and 128kW maximum charge rates. Irrespective of battery choice, that's about 31 minutes for a 10-80 per cent top-up.

The EV3's collection of disparate shapes, angles and lines shouldn't work but it does – and how. Illuminated by Gangnam's nocturnal light shows it looks compellingly fresh and distinctive. Its cabin game is strong, too. The combination of front-wheel drive, a first for Kia's dedicated E-GMP Electric Global Modular Platform, long ▶

IT'S THE SMALLER, MORE AFFORDABLE EV3 THAT'S TASKED WITH RACKING UP BIG GLOBAL SALES

They're not rivals – but they are both very good

Small on the outside, big on the inside

Casper will become Inster for Europe

A cool, calm cocoon amid the frenzy

Since Last Reset
Trip 265.3
Timer 19:59
Avg. 4.1

Kia EV-series design language keeps on giving

Hyundai's on a roll with its EVs

DACIA'S SPRING IS WAY CHEAPER BUT THE INSTER'S PREMIUM WILL FEEL LIKE MONEY WELL SPENT

2680mm wheelbase (the same as the Sportage), flat rear floor and slimline dashboard delivers almost decadent levels of space. And there's a massive 460-litre boot that expands to 1250 litres if you flip forward the 60:40-split rear bench, plus a handy frunk to swallow charging cables.

There's a relaxing, Scandi-like vibe onboard that perfectly complements the smooth drivetrain. Coarse-weave fabrics, matt plastics and brushed metal finishes all work together to create an atmosphere of understated tactile luxury. Guilt-free, too. The cabin uses no leather, there's no chrome inside or out, and each EV3 uses 28.5kg of recycled plastics, the origins of which can be found by using the little QR code found on the dashboard. Cute.

The EV3 is a calm and cultured sanctuary from the bedlam of Seoul's traffic. It rides with a relaxed and easygoing gait. It's likely the spring and damper rates will be recalibrated for European-bound models, so I hope this car's plump and softly-sprung composure isn't lost in translation. At 2.75 turns lock-to-lock the feel-free but direct steering is quick enough to make short work of gap-chasing, car parks and the vaguely illegal-feeling U-turns that are allowed at major junctions. The brakes are on your side, too, with plenty of immediate bite.

The EV3 is positioned as a family hatch, but Standard Range models will sprint silently to 62mph in 7.4 seconds, with the heavier Long Range models just a few tenths behind. Quick enough to have the onboard speed-warning system working overtime. There's decent acceleration whenever I squeeze the long-travel accelerator, making overtaking a breeze. It's no dynamic rule-rewriter, but it doesn't put a foot wrong either.

Next, it's the new Hyundai Inster – badged Casper for the Korean domestic market. For such a small car – it's just 3835mm long, has a 2580mm wheelbase, is 1610mm wide and 1575mm high – this chonky little Hyundai is going to have a big impact. It's clever and sassy and laden with equipment. But it's the Inster's estimated £23,495 price point that's the big news here. And that outlay doesn't put you behind the wheel of some stripped-out and de-contented base model, either. That gets you a 42kWh battery powering a single electric motor that dishes up 95bhp and 108lb ft for a 0-62mph dash in 11.7sec and an 87mph top speed. WLTP range comes in at a perfectly adequate 186 miles – it's an urban car, remember. There will also be a higher-spec model with a 'Long Range' 49kWh battery with a 229-mile WLTP range. Power climbs to 113bhp, the sprint time to 62mph drops to 10.6 seconds and top speed nudges 93mph.

At that price, its biggest rival will be Citroën's e-C3, with its well-judged combination of value, comfort, range and style. The Dacia Spring is way cheaper than both, but you'll only need a few minutes behind the wheel to realise the Inster's premium is money well spent. And the more expensive Fiat 500e? Try driving four-up and see which gives out sooner – your rear passengers or the Italian car's 24kW battery.

Given these credentials, the Hyundai could be a sales success even if it was tedious to look at and drive. But… well, just look at it. There's a lot to take in. The flared plastic-clad wheelarches, clamshell bonnet and robust roof bars give it a vaguely off-roadery visual bicep, while the round front and rear light give it an anthropomorphic character.

The cabin is even better. It may be the amuse bouche on Hyundai's electric menu, but the Inster offers its driver and three passengers almost limousine-like levels of lounging room. The front seats work together to create a bench, like a '57 Chevvy Bel Air, while the two 50:50-split rear seats individually recline and slide to boost either legroom or luggage space (from 283 to 351 litres; that climbs to 1059 litres with the rear ▶

> THE KIA EV3 FEELS SUSPICIOUSLY LIKE THE CAR THE VW ID.3 SHOULD HAVE BEEN FROM THE GET-GO

seats folded). No frunk, though. Flat front and rear floors further enhance real and perceived space, and you can even fold down the front seats for a doze.

There's so much more good stuff: a compact centre console liberally peppered with buttons, wireless charging, houndstooth fabric, logically structured menus on the central screen, and stowage space wherever you look. It's an interior that works well on all levels; intelligently configured, packed with interesting features and ideas, genuinely roomy.

Tackling Seoul's traffic crush again – does this city never sleep? – gives the Inster a chance to show its urban ability. This is the 95bhp/42kWh-battery version, and it feels way more alert and zippy than its 11.7sec 0-62mph saunter suggests. It slingshots away from standstill, slots into fast-moving traffic with ease and generally manages city driving like a boss. Hyundai quotes a 1305kg kerbweight (1335kg for the 49kWh model), and you can really feel the on-the-move agility and responsiveness that sylph-like weight delivers. The adjustable regen set-up is ideal for one-pedal driving, and while the brakes are up to the job, more initial bite would be welcome.

The quick and responsive steering works hand-in-glove with a low centre of gravity and decent body control to make easy work of impromptu lane-changes. Excellent visibility and tiny overhangs further add to the Inster's urban armoury. I muck about with the drive modes – Sport, Eco, Snow and Normal – and keep it in Sport mode for maximum jauntiness.

Parking up for a breather, I ponder the scale of the achievement here. The Kia blows me away. Distinctive and dynamic design, a spacious and intelligently-configured cabin, brisk performance and a cushioned ride quality, plenty of kit, impressive range – and all at a price that's closer to affordable than most rivals.

So impressive on so many levels. This is Kia showing VW how to do an electric family car properly. It's the ID. 3 that VW should have delivered from the get-go. And Tesla's Model 2, which would be a direct rival, won't be with us any time soon. That looks like a missed opportunity, in light of how good this car is and how popular it's likely to be.

The Hyundai is equally remarkable. It bullseyes the compact urban runabout target with a cool, Dikeç-like accuracy. A tiny car that's big where it counts, it's big on smart and adaptable packaging, big on personality and allure, and big on range and verve. It heralds the arrival of the accessible electric car with a classiness that's been so lacking from so many budget EV options released to date.

Right now, and with cars like the Ioniq 5 N and EV9 already with us, it feels like Korea is dominating the fraught paradigm shift from combustion to EV. The EV3 and Inster will only double down on that sentiment in 2025, by putting the same excellence within reach of more buyers. **car**

NEED TO KNOW **What is it?** Korea's new-wave EVs, already on the road in Korea | **Tech?** A compelling mix of generous batteries for the price, more than adequate performance and, in the case of the EV3, a claimed 372 miles from the 81.4kWh Long Range version | **Aimed at?** All of us | **When can I have one?** Soon

Slim dash helps maximise cabin size in the Kia

Bright lights, busy city: no denying Seoul's influence on the design

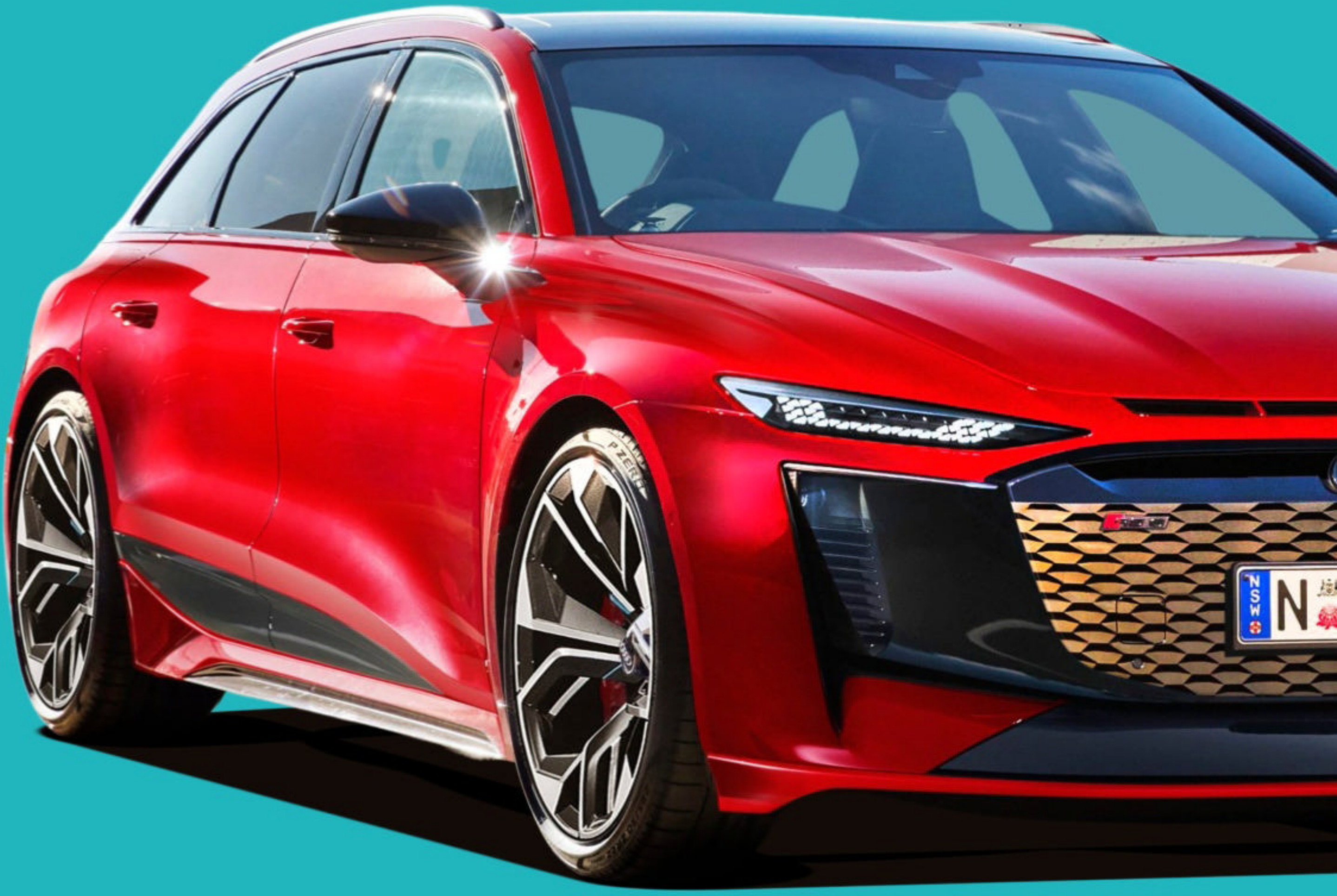
4

AUDI RS6 E-TRON & RS7

THE ULTIMATE CAR, YOUR WAY

Saloon or estate. Electric or hybrid V6. Fast or even faster. Meet Audi's new RS6 and RS7 family

Words Jake Groves **Illustration** Andrei Avarvarii



NOT ENOUGH POWER? DON'T WORRY, PERFORMANCE VERSIONS PUSHING AROUND 800BHP WILL FOLLOW

The executive in a hurry is about to be presented with some tough choices by Audi. The outgoing RS6 Avant – which was barely pipped by BMW's new M5 in last month's Giant Test – will be replaced not by a single car but by a whole family. So you'll need to pick electric or hybrid, and saloon or estate, and maybe consider waiting until the even hotter Performance variants come along. Nice problems.

Under Ingolstadt's new naming rules, the electric versions are called RS6 e-Tron while the plug-in hybrid is the RS7, and both are offered as estate and saloon. They're part of a busy year for new products from Audi, with new-generation Q5, Q7 and A7 models all launching before 2026.

The RS6/RS7 will stick to tradition in their design details: aggressive face, blistered arches, huge wheels and much more besides. The main visual differences are an open grille and exhaust tailpipes on the RS7.

By contrast, the powertrains both break completely with RS6 tradition.

For the combustion RS7, the V8 is out, replaced by a V6 plug-in hybrid powertrain that Audi also intends to use in the smaller RS5 range. Our sources indicate that power will differ between the RS5 and RS7 via scalable electric motors, rather than big engine changes; the smaller Audi Sport exec is likely to be good for around 600bhp, while the RS7 could reach around 725bhp.

The V6 plug-in powertrain also includes a boost function, kicking in around 50bhp for limited-time bursts, and you can expect customisable drive modes. Not enough power? Don't worry, Performance versions pushing around 800bhp will follow a year later.

The electric RS6 e-Tron uses the Premium Platform Electric (PPE) architecture, which enables an 800-volt electrical architecture for fast charging, high-power dual motors for outputs well over 700bhp and enormous batteries for a long range between charges.

PPE's stablemate Premium Platform Combustion, adapted to suit internal-combustion powertrains, is deployed in the RS7. This chassis duo, developed by Audi and Porsche, is handy in a confused car market that's far from fully committed to going all-in on EVs.

As well as the paired platforms and the boost function, there is more technology in service elsewhere that could be used. The most interesting is the active suspension that's available on Audi's own e-Tron GT, having earlier appeared on the hot S8 saloon, and now pilfered by Porsche for its latest Panamera and Taycan models. This could give the new Audi some real dynamism to take on BMW's heavyweight M5. **car**

NEED TO KNOW **What is it?** Audi's split-personality performance exec | **Tech?** On-demand e-boost, fast EV charging, possible active suspension | **Aimed at?** Alpine-living thrill seekers | **When can I have one?** End of the year

3

TEMERARIO

STORM WARNING

The Temerario marks the start of a new generation of supersports cars for Lamborghini, and one that's not taking any prisoners. A screaming V8 and three electric motors, a clever lightweight platform and a high-tech interior are all here. Chief technology officer Rouven Mohr says that, following the pattern of previous models, the version that launches in 2025 will be joined by increasingly extreme options.

The V8's current 789bhp isn't its full potential, he tells us. 'There's another 20 per cent of power reserve in there, and perhaps if you make small modifications you can even do more than that. But that 20 per cent will span the car's life cycle.'

The configuration of the e-motors and transmission would make a rear-wheel-drive model tricky. 'It's not the easiest one to do,' says Mohr, 'but it's clear we're thinking about it. For the Temerario race car we'll reveal in 2025, that runs without hybridisation. There are ideas on how to make a two-wheel-drive version, but you would have to completely redesign the hybrid system to make it work.'

And a drift mode? 'We wanted to try to differentiate Temerario with some cool features that me, my team and our test drivers like. But our aim is to make it as smart as possible, and as natural as possible.'

NEED TO KNOW **What is it?** Lamborghini's Huracan successor | **Tech?** High-revving hybrid V8, drift mode, Revuelto-spec interior tech | **Aimed at?** Huracan owners wanting more | **When can I have one?** First half of the year

2

■ FERRARI'S FIRST EV ■

WEIGHT EXPECTATIONS

Fashionably late, the first electric Ferrari matters – and it arrives this year. By **Ben Miller**

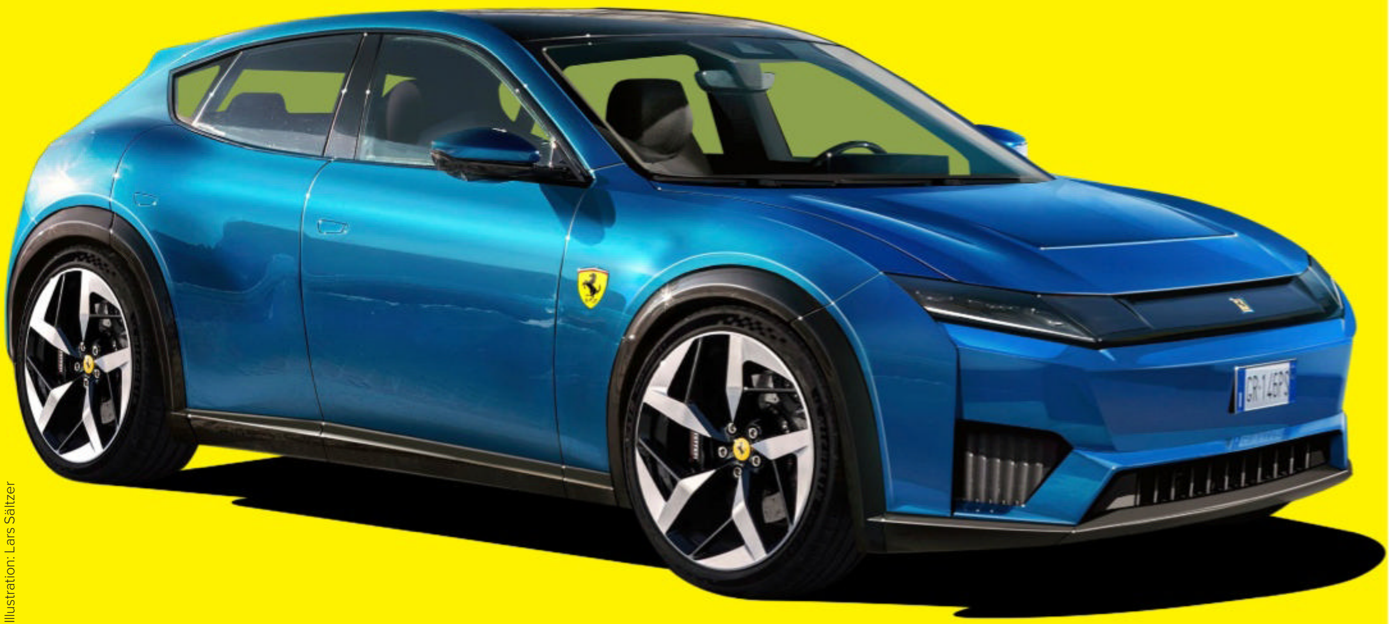


Illustration: Lars Sältzer

Its cars may be entirely irrational purchases but a cool vein of logic runs through everything Ferrari does. It spent a pile of money on a jewel-like twin-turbo V6 but is busy amortising the R&D outlay across a number of production cars and a rampantly successful world endurance programme that's already won Le Mans. And the Purosangue was green lit only when it was clear Multimatic had a suspension system that would allow Ferrari to build a crossover that drives like no other high-riding quasi-4x4.

Yet there's no obvious wisdom in its decision to create a fully electric car. While all around others are losing their nerve (the first electric Bentley is now a 2026/2027 car, Lotus has pressed pause and Aston and Lamborghini are in no hurry), Maranello is pushing on. That's due in no small part to CEO Benedetto Vigna, who's adamant the car will be an exceptional Ferrari first, electric second. 'When you have nothing it is a good excuse to postpone,' he smiles, in reference to rivals' reticence. What's more, Vigna's confident the car will appeal on the emotional level on which any Ferrari must operate. After all, there are no grants or tax breaks in the rarefied air it will breathe.

'We develop new technologies out of a desire to improve the quality of life, not only from a utility point of view but also for fun. The electric car will do this. I have driven it, and it is something unique. The people making electric cars today must optimise the cost – we have the luxury of not having to do this.'

As chairman John Elkann pointed out at the opening of its new e-building, Ferrari's electrified expertise is considerable (F1, Le Mans, several compelling hybrid production cars), even if its EV back catalogue is non-existent. Reason to be hopeful, then, even if spy shots appear to show an awkward 2+2 crossover. Electric supercars are a tough sell, undoubtedly, and the SUV body style suits the powertrain, certainly; clearly unconvinced the technology yet has the specific output to work in a pure performance car, Lamborghini is thinking along similar lines, as is Bentley. But the decision to go SUV will disappoint anyone hoping Ferrari was going to do for supercars what the electric Cayman and Boxster promise to do for sports cars.

NEED TO KNOW **What is it?** The first Ferrari without an engine | **Tech?** A punchy and (it's claimed) authentically musical all-electric powertrain | **Aimed at?** Good question | **When can I have one?** In a little over a year's time

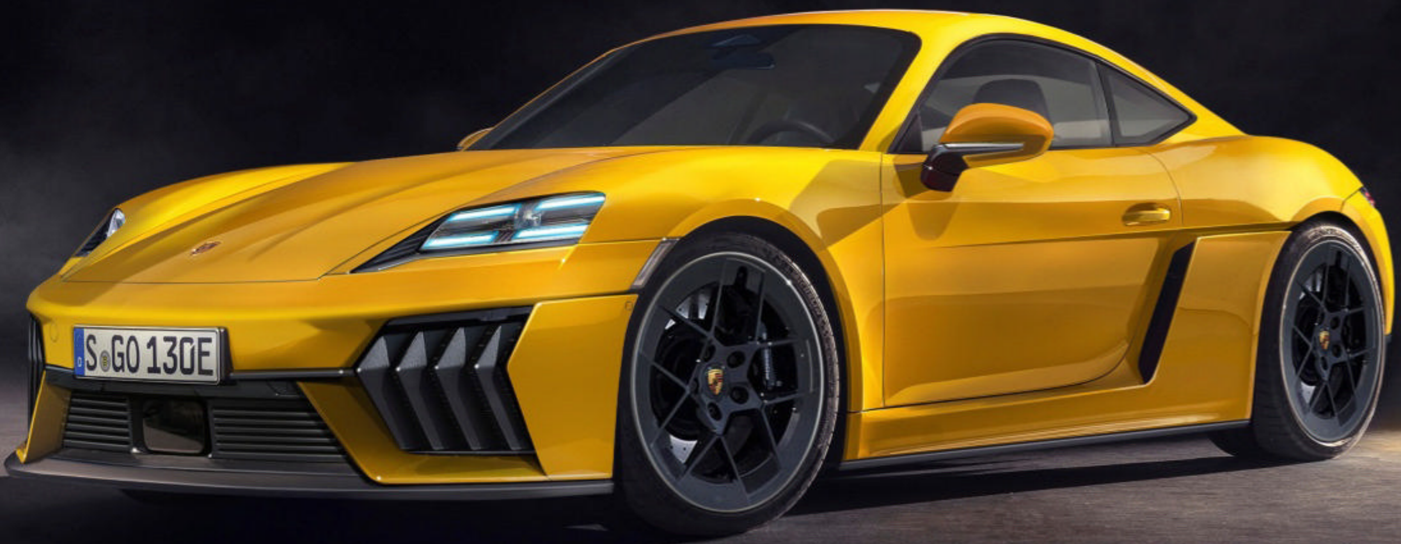
1

PORSCHE CAYMAN & BOXSTER

GOOD THINGS COME TO THOSE WHO WAIT

Porsche's long-delayed electric Cayman and Boxster are finally due. Can they banish doubts about the very idea of an electric sports car?

Words Georg Kacher **Illustrations** Lars Sältzer



If Boxster had hit its first deadline, it would have beaten MG to market

Porsche R&D boss Michael Steiner should have known better. Once bitten, twice shy. It's not long ago that he was set back by about 18 months when Varta, the battery supplier for the hybrid 911 GTS, had to be saved from insolvency by a last-minute cash infusion courtesy of Porsche. And now history is in the process of repeating itself, as Northvolt – the exclusive provider of batteries for the electric Boxster/Cayman twins – has spent months in crisis mode, scrambling for fresh capital and going into bankruptcy.

Efforts are being made to stop this second battery train from derailing, but the damage is already done: the new sports cars, codenamed 983, were originally due to go into production in February 2023, but are now slated for October 2025.

Had it stuck to the original schedule, the electric Boxster roadster and identically engineered Cayman coupe would have had the D segment of the electric sports car market all to themselves. Now they must share the terrain with newcomers led by the MG Cyberster, priced between £55k-£60k – aggressive numbers Porsche cannot possi-

bly match. We don't know how much exactly the two-seaters from Stuttgart will cost, but they are not going to be less expensive than the outgoing range.

That said, the electric twins will come with a significant power boost. The combustion cars' outputs are in the 300-500bhp bracket, whereas the electric S models will develop around 380bhp and 440lb ft; GTS spec will be a twin-motor affair with around 490bhp and 550lb ft available. Like the Taycan and electric Macan, there will be versions badged Turbo, too, with one source claiming around 600bhp and 650lb ft.

S and GTS are said to feature 89kWh batteries; only the Turbo is claimed to use a more potent 99kWh energy pack. While the rear-wheel-drive model reportedly features two e-motors – one for each rear wheel – the all-wheel-drive derivatives add a third motor that drives the front wheels. According to a Scandinavian colleague who has spoken to a couple of factory test drivers, the rear axle is dynamically remarkable, offering extreme torque vectoring for rapid cornering and real slideability.

We know that the twins run an 800-volt electrical system for ultra-rapid charging, extended driving range and exceptional efficiency, but we know very little about that new battery except that the cell format is prismatic, not round, which is one reason why BMW pulled out of the Northvolt deal and struck an agreement with China's CATL and EVE instead. Apparently Steiner was particularly impressed by the Northvolt cell chemistry and the scalable design, reportedly highly space-efficient thanks to its compact, light and slim packaging.

STAYING ENTIRELY TRUE TO PORSCHE TRADITION, THE 983'S INTERIOR IS FUNCTIONAL RATHER THAN SEXY

The battery performance apparently combines high repeatability and low degradation, 15-minute fast charging and an official WLTP range of over 325 miles. It's also, we hear, good at coping with wide temperature variations.

But there are rumblings of discontent about the consistency of the quality of the Northvolt batteries, and the battery company's worsening financial situation means it's not yet clear where exactly the Porsche energy packs will be built. There are also unanswered questions about what, if any, input there has been into the 983 from the Croatian EV and software wizards at Rimac, who contributed to both the Taycan and the 911 GTS.

What precisely are the underpinnings? The original plan had been to base the 983 on SSP Sport, the lighter, stiffer, sportier derivative of the VW Group's upcoming Scalable Systems Platform masterminded by Porsche and Audi. But then SSP got pushed back to 2028 or even 2029, dragging the Volkswagen brand's prestige Trinity project along with it. Frustrated by the slow pace of this group-wide project, Porsche broke ranks and created its own architecture named Mission R after the 2021 concept.

Until quite recently it looked likely that these same underpinnings could be used in cars wearing VW, Cupra and Audi badges. VW was toying with a modern successor to classics such as the Karmann Ghia and Scirocco, and Cupra pitched the DarkRebel as its new halo car. But those plans have now been rejected. New Audi boss Gernot Döllner apparently received the green light to use Mission R for a sports car project – an ▶

electric heir to the Quattro, TT and R8 – but that now looks less certain, given the current business woes at Ingolstadt. So for now, it will be just the Boxster and Cayman.

Spy shots of the Boxster E show familiar design cues and evolutionary proportions. The wheelbase seems to have grown by 10-15cm to make room for the T-shaped battery stack, which occupies the space between and behind the seats, not under them.

The lateral air intakes are no more, the considerably wider rear track can accommodate bigger tyres, while the higher and longer rear deck should be able to compensate for the loss of luggage space in the frunk. Those spy shots show a charging port positioned in the centre of the rear end, like a futuristic counterpart to the mid-mounted exhaust tailpipe. We expect wheel and tyre options to go up to 911-spec sizes for those customers willing to pay extra.

The front is slightly longer and a little more pointed than before, and sits closer to the road. It houses three automatically adjusted air intakes, suggesting a mix of low drag resistance and strong cooling performance. The four-point LED-matrix headlamps used throughout the Porsche family appear here, and at the back the light runs the full width of the car; pay extra and you can have the word 'Porsche' illuminated.

Staying entirely true to Porsche tradition, the 983 interior is functional rather than sexy. There are three round instruments, which can be personalised with whichever combination of information you favour, the same as in the Taycan. Thumbs up to the modified switchgear, which brings back physical climate controls, a real knob to adjust the volume, two programmable diamond rocker switches high up on the dashboard, the traditional rotary drive mode device on the steering wheel and an optional passenger display.

The gear selector – forward, neutral, reverse – is a short upright stub in the centre console next to the parking brake, itself a button rather than a lever. Most of the switchgear will look familiar to anyone who's driven any Porsche recently. You can,

SPY SHOTS SHOW FAMILIAR DESIGN CUES COMBINED WITH EVOLUTIONARY PROPORTIONS

No engine, but Cayman keeps its mid-engined proportions

as before, specify the Chrono pack complete with stopwatch. The sound system is scalable to the depth of your pockets. Massage seats are not on offer, and nor is a more compliant Touring suspension system.

Perhaps not at first, but at some point during the 983's early life it should be possible to buy a lightweight Weissach pack, 3D bodyform seats, ceramic composite brakes and an aero kit that should enable some combination of going farther and faster.

In a way, Porsche will not perhaps be terribly upset by the lateness of the electric Boxster and Cayman's arrival. A wait of 32 months might sound bad, and it might seem as though a lot of potential sales been missed, although the reality is that there are still no direct competitors on sale if you exclude the softer Cyberster. No electric replacement for the BMW Z4 or Toyota Supra, and no sight yet of the much-discussed electric sports cars from Lotus and Alpine. The market might in fact be more ready for the Porsche duo in October 2025 than it would have been in February 2023.

After all, EVs still are not an easy sell, and this experience is rocking premium brands more profoundly than volume manufacturers. Innovations are happening so fast that any investment in expensive yet fast-dating high-end products is increasingly risky rather than a smart buy.

The Taycan proved Porsche can make an excellent EV, and it's still highly impressive today. But there has been a brutal drop in the used values of Mk1 Taycans, and demand for the Mk2 has not been as strong as Porsche had hoped, despite positive reviews. Through no fault of Porsche's, the appetite for EVs just isn't so strong as it was back in early 2023, when the Boxster and Cayman were originally due, not least because there are growing doubts, fed by the US election result among many other factors, that the combustion engine may be around for longer than was previously thought.

The only way Porsche can break this negative downward spiral is by offering more sustainable and more emotionally appealing EVs that have strong statistics to back up the undoubted dynamic excellence. Charging times need to be quick and the distances between stops need to be long. They also, being Porsches, need to be able to stand up to the intense demands of trackdays.

Can the 983 meet these targets using the hardware and software currently available to Porsche? Potential game-changers such as solid-state batteries, smarter software and significant weight-reduction measures will have to wait. Given Porsche's strong record and high standards, it's probably safe to assume that the 983 will make excellent use of today's technology. But many of the target buyers remain firmly attached to engines, so the Cayman and Boxster are unlikely to find them a pushover. **car**

NEED TO KNOW **What is it?** Boxster and Cayman reinvented in electric-only form | **Tech?** 800-volt electrics, choice of two motors and rear-wheel drive, or an extra motor driving the front wheels | **Aimed at?** 718 owners who've been clinging on for a replacement | **When can I have one?** Late 2025 … all being well

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THRIVE

No matter whether you're a gentleman driver or a young talent, Ferrari's 296 Challenge racer offers a career path like no other

Words Piers Ward **Photography** Ferrari

CORSO PILOTA
INSTRUCTOR

Never has a man failed to live up to the Corso Pilota tag quite so comprehensively

The Ferrari 296 Challenge racer explodes into life: loud and violent but entirely justified. This is the coldest of cold starts, and the car is merely beginning as it means to go on: focused, raw, with zero fripperies or cute 'welcome displays' from its headlights.

I leave the pits and head into the first corner. And do you know what? It's a pussycat.

The brake pedal is outrageously light; delicate to the point of feeling like an EV on a run to the shops. The steering's the same: nimble, with minimal weight. Even the shift paddles drop the eight-speed gearbox to the next ratio with a gentleness that defies every expectation about racing cars.

Throttle response is also gentle. With relatively large, and therefore laggy, twin turbos, the pace climbs gently rather than snapping you to warp speed. It's easy to modulate. There's nothing intimidating about the weight of its controls.

Of course it's fast. But the initial laps reveal it to be approachable, a car that you can build up to; impressive from the off before revealing more and more as your confidence grows. The equivalent of speed dating and getting to meet the folks on the same evening.

This is important because this isn't any old Ferrari racer – it's a track car with a dual purpose: to be friendly enough that gentlemen drivers (code for not so quick) can get on well with it; but with the speed to let hotshot young talent impress Ferrari bosses in what is the (admittedly rarefied) entry point to the Ferrari racing ladder: the Challenge series.

It has been running since 1993 and has been consistently and successfully honed via various mid-engined Ferraris including the 360 Stradale and 488.

My first experience of this world was the Finali Mondiali at Monza in 2006, Ferrari's annual pat-itself-on-the-back track jamboree and one of the more bizarre experiences of my life. During that weekend, Michael Schumacher was retiring as a Ferrari F1 driver and the great and the good were wandering around the paddock: Jean Todt picked up a sizeable entourage of hangers-on, Luca di Montezemolo was at the height of his pomp having effectively 'retired' Schuey despite all his F1 records. Meanwhile, the grandstands were full of 45,000 tifosi to witness me, Piers Ward, make his Ferrari debut…

Never having driven any Ferrari before, let alone raced one, I got to pop my cherry at 'the temple of speed' in a 360 Challenge Stradale. Having only ever competed at UK tracks in front of a crowd of three, two of whom were lost, it was a whirlwind introduction to the Prancing Horse and the power of the brand. The addiction of it. It was a life lesson in trying to resist the power of a badge to brainwash you.

No one, not even Porsche, can offer amateur drivers that rare opportunity of being so far inside the tent and being so much a part of the Ferrari fraternity. There are much, much cheaper ways to go racing – the car costs over £300k and a season will probably set you back a cool £500,000, including the car. But because Ferrari owns the entirety of the 296 package, in terms of the car, its build, the series and the weekends that it races in, it can offer a unique embrace that no other brand can match. The buzz you get from all that should not be

The first two bonnet scoops are for cooling, third is for aero

Thanks to the 499P LMH car, the 296 offers a career path with the potential to climax in an overall win at Le Mans

underestimated – a dopamine hit that ultra-high-net-worth people can't get elsewhere. And now, thanks to the 499P LMH World Endurance car, it's a career path that could potentially climax with a Le Mans win: Nicklas Nielsen, one of the drivers of the winning car in the 2024 endurance race, was a Challenge champion in 2018.

Through each of those generations, the emphasis has shifted from what was essentially a road car with a cage to this 296, which borrows almost as much from the sibling GT3 racer as it does from the GTB road car.

It starts with the body-in-white going down the same Maranello production line as the GTB and into the same paint shop. It also gets the same 2992cc twin-turbo V6 as the GTB. But the differences in both the build (after the paint shop, it goes onto a separate build line) and spec are marked: the hybrid system is removed, thus saving weight and reducing complexity (overall, the car is 140kg lighter), the turbos are spun 10 per cent faster to 180,000rpm, the engine revs to 7000rpm, there's an entirely new interior including the same seat as the GT3 racer, bespoke carbon-ceramic brakes made with longer carbonfibre strands that are more durable and conduct heat better, and a full rollcage installed in two halves and then bolted together. The details on the latter were sweated hard by Ferrari, particularly around the A-pillar, to ensure that gentlemen drivers of a generous size can get in easily. It's still mighty tight in there.

Along with the new brakes, the aero is where things have clearly moved on from the previous Challenge cars. The bald figure is a maximum 850kg of downforce (18 per cent up on the last car, the 488 Evo) but it's the downforce 'map' Ferrari uses that's the most impressive part, almost like an aerodynamic mood board. Think gentle curves and pillowy landings rather than cliff-edge drama.

Balance is key. The package needed to have plenty of downforce to give racecar performance, but if it was too peaky the amateur drivers who form the core of the car's target market wouldn't cope.

To that end, the S-Duct on the bonnet plays a crucial role. Ground effect is a significant source of the car's downforce but, as we all know from F1, it's subject to huge variances depending on the car's ride height and pitch. By using the S-Duct to connect the underside with the upper body and maximise the efficiency of the central diffuser, it keeps the aero more stable.

After our first few laps, it's time to head back in to download the telemetry, helpfully with a coach to interpret it all and offer tips, which for me can be summed up in just two words: brake later. I do find one moment in which I'm quicker than the delta target lap and proudly declare this to my bemused instructor. But the overall story is a consistently depressing one of being both way too early on the brakes and not using enough pressure; literally less than half the required brake pressure into some corners.

Heading back out for another run – four laps followed by a data crunch is an effective way to learn – I eventually pluck up the courage to hit the stoppers where they want me to at the end of the Circuito Monteblanco's start-finish straight. ▶

With 850kg of downforce, corners are rarely an issue

WATCH THE VIDEO!

GET THE *CAR* APP – SEE PAGE 58 FOR DETAILS

FERRARI 296 CHALLENGE

PRICE £316,314
POWERTRAIN 2992cc twin-turbo V6, seven-speed dual-clutch auto, rear-wheel drive
PERFORMANCE 690bhp @ 7500rpm, 546lb ft @ 6000rpm, 2.9sec 0-62mph (est), over 205mph (est)
WEIGHT 1330kg (dry)
EFFICIENCY n/a
ON SALE Now

Helmet, HANS, overalls … now just for the skill to match

You don't feel the car hunkering down like you would, say, in a Porsche 962. But it is a mighty stable machine

This feels better, bleeding the brakes into the apex and using them to rotate the car rather than furiously and repeatedly stabbing the throttle. It's a complete mental switch for me, an area where I need to unlearn a lot of my habits from racing historic cars, in which I (probably incorrectly) get on the accelerator early to use it to get the nose rotating. In the Ferrari, you have to trail brake into the heart of the corner, then get on the power. I'm consistently too eager to jump on the right pedal – but at slower speeds the aero isn't working, so all it does is wash the nose wide.

There are two settings for the traction control – the 296 Challenge's equivalent of the GTB's *manettino* – and I can feel them trying to tug it straight via the e-diff and engine mapping. There's never any danger of going off with armfuls of understeer, but it isn't quick.

When the car hooks up – or rather when I drive it as I should – it transforms. You don't feel the aero hunkering you down like you do in, say, a Porsche 963, but it is a mighty stable machine. There's one flat right-hander that requires a gearchange mid-corner, a moment that would yield quite some trepidation in an historic car. In the 296 it's easy. The gearchange is quick and smooth; the car remains flat.

By bleeding out of the brakes correctly as you approach the apex, the 296 feels wonderfully linear and arcs beautifully from a left into a right, the nose tucked correctly and the rear following dutifully. There are no awkward momentum shifts because everything is so harmonious. The power comes easily and you can sense the increased speed. And as a result there are, at last, some vaguely positive comments from the passenger seat.

Then we get a hot-lap ride with Thomas Neubauer in the driving seat, an ex-Challenge racer who's now signed up to Ferrari's works programme. And all of a sudden the 296 reveals its ultimate potential, in a brutal, chest-smashing experience that shows just how physical you can be with the car. I've been lucky enough to experience plenty of hot laps with pros. But I can't recall another this violent. Kerbs are shown no mercy and he's incredibly physical with the steering, using a combination of wheel inputs and sheer speed to bully physics into submission. He is definitely not paying for the consumables.

When I raced that 360 Challenge at Monza, it all felt a bit vacuous – there were quick drivers competing but it lacked the gravitas of a Porsche Cup round. It was lovely and very special but it also seemed slightly fake. Wealth with little sense of reward.

But things have changed since then and Ferrari has got wise to the potential of tapping into two revenue streams: money and talent. By offering a route beyond the Challenge series into the likes of the GT World Challenge Europe Sprint Cup (formerly Blancpain) and fully-fledged LMGT3, there is now a clear path. By creating a machine in the 296 that is so close to being an actual racing car that it allows Maranello to properly assess driving ability, Ferrari can mine a rich seam both of gentlemen drivers and hot young talent.

The car is incredibly impressive but, as ever with Ferrari, it's the eco system around it that is the difference. I'll wait for the call… car

Our cars

HELLO VOLKSWAGEN ID. 7 + GOODBYE RENAULT CLIO, SKODA ENYAQ & ALFA ROMEO STELVIO

Saloon has a drag coefficient of just 0.23; estate version is 0.25

Jordan Butters

Smooth operator

The most aerodynamic ID car yet may also be the best. By **Tim Pollard**

Volkswagen ID. 7 Pro Match 77kWh
Month 1

The story so far

VW's large electric family car becomes the daily driver for a family of tall people

+ Space on offer; promise of decent range; toys aplenty

- Anonymous jellymould styling

Logbook

Price £51,550 (£55,270 as tested) **Performance** 77kWh battery, e-motor, 282bhp, 6.5sec 0-62mph, 112mph **Efficiency** 4.7 miles per kWh (official), 3.3 miles per kWh (tested), 0 g/km CO2 **Range** 383 miles (official), 254 miles (tested) **Energy cost** 7.4p per mile **Miles this month** 242 **Total miles** 3569

It's taken five years for Volkswagen's ID range to proliferate into an entire family of EVs: we've now lived with the ID. 3, ID. 4, ID. 5 and ID. Buzz, the latter my own last-but-one long-term test car. Hopes are high that they've ironed out the shortcomings of the previous quartet and squeezed learnings galore into the ID. 7.

Available as a hatchback or estate, it's priced from £51,550 as a rival to the Tesla Model 3, BMW i5 and a growing list of alternatives. We've plumped for the saloon in entry-level Pro Match spec. Even this lowliest trim brings niceties such as three-zone climate control, electric everything, keyless entry and start, adaptive cruise and clever matrix lights; the novelty of their dancing beams may wear off, but I shall always be grateful for the excellent visibility they provide at night.

The drag coefficient is an impressive 0.23, achieved by the combination of sleek shape and smooth surfacing. Very little sticks out; the door handles are near-flush, there's no airflow-snagging grille on the nose, and the underside is as flat as can be. The effort put into aerodynamics pays off with an official range of 383 miles from the 77kWh battery.

Underpinning the ID. 7 is Volkswagen's ubiquitous MEB hardware, which in the case of our relatively cheap model involves a single e-motor driving just the rear wheels. The 282bhp output is a substantial step up from the 201bhp of my ID. Buzz. This is neither a light nor a small car, at 2.2 tonnes and 4961mm long, but performance is sprightly enough with a 6.5sec 0-62mph sprint time.

Ours comes in a sober suit, with Aquamarine Blue metallic paint and black roof (at no extra cost, which can't be taken for granted these days). It's slightly anonymous but at least it looks and feels lower-slung and more saloon-like than the bulbous ID. 4 and ID. 5. I just wish there were more character in the design – although everything in the ID line-up pales beside the head-turning, joyful Buzz.

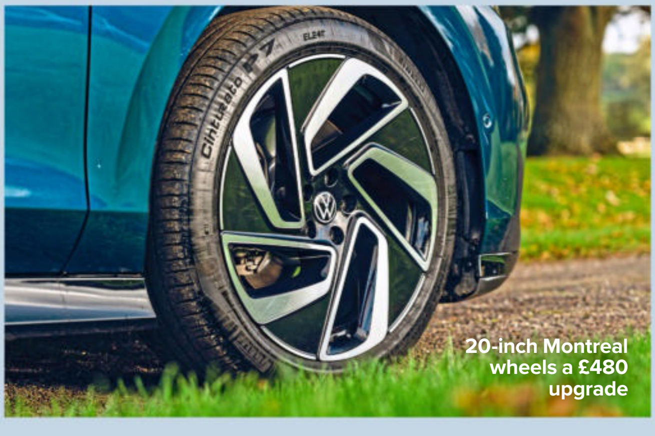
There are a few options on our car: the standard 19-inch alloys have been upgraded to 20-inch Montreal rims with a diamond-turned finish (yours for £480) while an automated towbar drops out on command (£1050) and there's a three-▶

Interface is simple and less annoying than before

point-plug charging cable that I'll probably never use, but it's nice to know we have a last resort if I ever get desperate. At £190, it's the most expensive extension cable in my household.

The priciest extra is Volkswagen's Interior Pack Plus, which brings the excellent Harmon Kardon sound system, ventilated massage seats for both front occupants and heated outer rear seats. The pack adds £2000 to the bill and so far it seems nice-to-have rather than an essential upgrade. The stereo sounds crisp and clear, but I think I'll appreciate the seat massage function most. Is that worth two big ones?

It's a roomy package and I've already ferried family teenagers and grown men in the back without complaint. There's pleasingly no intrusion in the rear passenger footwell, thanks to the electric-drive architecture, and the boot is capacious and sensibly sized, too. VW quotes a luggage capacity of 532 litres, expanding to 1586 litres if you tip the rear seatbacks down.



20-inch Montreal wheels a £480 upgrade

This is neither a light nor a small car, at 2.2 tonnes and 4961mm long, but performance is sprightly

There's a lot to be said for the Tourer. It's a modest £690 more than the hatch and packs an even more commodious 605-litre loadbay.

Whichever body you go for, the 77kWh lithium-ion battery is warranted for eight years or 100,000 miles (whichever passes first) and can accept charge at up to 175kW if you find a suitably rapid DC charger. That's not as quick as the 350kW you'll find in a Hyundai/Kia or Tesla, but should be sufficient to top up 126 miles of range in just 10 minutes. A fuller charge from nearly empty to 80 per cent will take around 28 minutes, according to its maker.

We'll be testing the true range of the big electric VW in the months ahead. For now, we're just getting to know our way around the interior, which seems to be well made from good-quality materials, and has a huge touchscreen. My bugbear on earlier ID models – that the touch sliders weren't illuminated at night – has thankfully been fixed. Quite why such a ludicrous error was made in the first place remains a mystery, but it's almost certainly down to the rush towards electrification after Dieselgate.

It might've taken a global business scandal to sire this range of electric Volkswagens, but the ID. 7 doesn't feel rushed at all. Early drives suggest it might just be the best electric car VW has made yet – and this extended long-term test should provide the definitive answer.

Murphy's law strikes again

The day didn't begin well: a broken home charger – on account of it having no phone signal, of all things – meant the Mini didn't start a journey to Heathrow fully topped up.

The nav within the Mini phone app should in theory be good for in-journey solutions, offering options as to where you can stop and containing details like charger speed and availability. In practice, less so.

One charger it offered was in the middle of a private car park, another was on the wrong side of the M4. I finally managed to get juiced up thanks to a combination of Zapmap and Google Maps but it's frustrating that what should be a one-stop app doesn't live up to the promise.

PIERS WARD

Mini Cooper SE
Month 3

The story so far

Whole new car, but some of the tech lags rivals

+ General public retains a lot of love for the Mini brand

- Colder weather has killed the efficiency

Logbook

Price £34,500 (£39,799 as tested) **Performance** 49kWh battery, e-motor, 215bhp, 6.7sec 0-62mph, 106mph **Efficiency** 4.2-4.4 miles per kWh (official), 3.8 miles per kWh (tested) **Range** 240-249 miles (official), 186 miles (tested) **Energy cost** 6.0p per mile **Miles this month** 1123 **Total miles** 3518

Sublime and ridiculous

I'm getting used to the i5 and perhaps no longer noticing the things that bothered me at first. So I take a look through the notebook I keep in the i5's centre console, which reveals quite a mix of positives and negatives.

The biggest positive actually comes from various passengers, who all comment on how successfully the BMW combines pace and serenity.

From the driver's seat, though, I find the big screens are fingerprint-magnets, and a complete pain to keep clean. The boost paddle seems like a range-enhancing gimmick. Why not just have all the grunt available all the time, or use the equivalent of a kickdown on the accelerator pedal?

BEN WHITWORTH

BMW i5 eDrive40 M Sport Pro Touring
Month 4

The story so far

Electric estate that's not exactly strong value for money

+ Pace; economy; refinement; capability

- Looks; residual value; that boost paddle

Logbook

Price £78,450 (£94,995 as tested) **Performance** 81.2kWh battery, e-motor, 340bhp, 6.1sec 0-62mph, 120mph **Efficiency** 3.7 miles per kWh (official), 2.9 miles (tested) **Range** 301 miles (official), 242 miles (tested) **Energy cost** 3.0p per mile **Miles this month** 1323 **Total miles** 3807

Hint of Apple in the S3

One of my favourite pieces of Apple design is the clickwheel, as found on iPods. Minimal and intuitive, it's way better than the messy haptic nonsense you'll find on many car steering wheels and touchscreens.

I'm therefore surprised and happy to report that the S3 employs its very own version of the clickwheel. Located near the gear selector, it's just used for audio, but it's probably the best piece of design in the cabin.

Click left and right to skip or repeat songs, down to mute them, and up to turn off the infotainment altogether. Volume is handled by swiping your finger around its circumference.

It's a shame you can't use it for all the other menus, really.

CURTIS MOLDRICH

Audi S3 Black Edition TFSI S-tronic
Month 2

The story so far

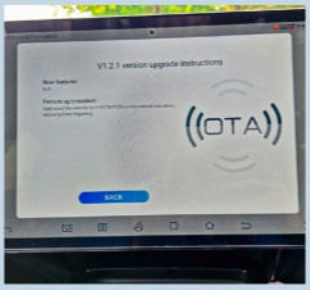
Best bits of the old RS3 in what should be a Goldilocks package

+ Understated looks; strong performance; great colour

- Is it interesting? Or not quite special enough?

Logbook

Price £47,490 (£51,135 as tested) **Performance** 1984cc turbocharged four-cylinder, 328bhp, 4.7sec 0-62mph, 155mph **Efficiency** 34.4mpg (official), 19.2mpg (tested), 188g/km CO2 **Energy cost** 32.0p per mile **Miles this month** 599 **Total miles** 758



From the mothership

In the space of a month or so, my Seal has had two separate over-the-air updates beamed down from the heavens. The first was to tweak the cross-traffic safety alert – buyers had moaned about it being over-zealous, and I could attest to that – and it's mostly calmed down. Mostly.

The second introduced some handy quick-access buttons on the home screen. As it gets colder, the heated seat button that's now part of the main screen instead of at least three taps away is very welcome.

It's a move in keeping with the easy-to-live-with nature of the Seal. It's smooth and fast to drive, cool and calm inside, and I get 300-plus miles per charge.

JAKE GROVES

BYD Seal Excellence AWD
Month 3

The story so far

Two welcome OTA updates

+ Tech gets slicker; good range predictions; smooth to drive

- Cross-traffic alert still skittish at roundabouts, post-update

Logbook

Price £48,695 (£48,695 as tested) **Performance** 82.5kWh battery, two e-motors, 523bhp, 3.8sec 0-62mph, 112mph **Efficiency** 3.4 miles per kWh (official), 2.93 miles (tested) **Range** 323 miles (official), 304 miles (tested) **Energy cost** 11.5p per mile **Miles this month** 1946 **Total miles** 8030

'You remind me of me when I was younger'

Alex Tapley

Darwinian disappointment

An unplanned rendezvous with a previous-gen E-2008. How superior do we feel? By **Ben Miller**

As our letters pages aren't afraid to highlight, most EVs (Teslas make it look easy) are at their worst driving long distances, at speed, to new places, with no notice. Times have changed; a bit. Bigger batteries have become (slightly) more affordable and charging infrastructure has (slightly) improved. But mid-trip charging is a reality for those of us with modest range.

Where round trips have fallen into the gap between the real-world ranges of my last EV (a £90k Audi e-Tron GT that could comfortably go 240 miles) and the £40k Peugeot (circa 180 miles; the display always says 240 with a full charge despite months of evidence to the contrary), I've settled on my favourite top-up locations. Expensive though it may be, Ionity's network is powerful and the app is slick, so you can take a look 10 minutes out to check they're not all in use and get charging fast on arrival. Crucially for this addict, they're never far from a Starbucks either.

Bumping into a previous-gen E-2008 (at, yes, a Starbucks), it's clear Pug's zero-emissions crossover has evolved. The first electric version launched in 2020, with its multi-energy CMP architecture, and featured a 50kWh battery (gross) and a 134bhp e-motor. Claimed range was 191 to 206 miles, and in truth it was more like 165 (45kWh usable and circa 3.7 miler per kWh). My version, with its slightly bigger 47.7kWh battery, is smarter looking, slightly quicker and very slightly longer-legged.

But it's still not a practical long-range motorway conveyance, if that's your jam. The battery's too small, the charge curve too humble and, as with the pre-facelift car, the software appears unable to accurately modify its predicted range in light of its real-time energy consumption.

Does any of the above matter if regular, long-distance motorway work isn't on your agenda? Not really. And while fuel stops at petrol stations are a miracle of convenience, paying for the privilege hurts. My wife's Volvo XC40 is often a tempting idea when Heathrow or Gatwick beckons. But the Pug always wins for its buttery-smooth powertrain, snug interior and £7 recharge bills (at home).

And the next generation? Likely 2026, on Stellantis's in-the-pipeline STLA Small platform. With batteries of up to 82kWh, 300 miles or more should be a breeze. Good news for me, bad news for Starbucks.

Peugeot E-2008 GT Electric 54kWh

Month 5

The story so far

Peugeot's popular compact electric crossover, sent to prove great EVs don't have to cost as much as a cottage

+ Stylish inside and out; nicely finished; good to drive

- Optimistic range predictor; brake pedal; price

Logbook

Price £40,700 (£42,060 as tested) **Performance** 47.7kWh battery, e-motor, 154bhp, 9.1sec 0-62mph, 93mph **Efficiency** 4.9 miles per kWh (official), 3.9 miles per kWh (tested) **Range** 227-271 miles (official), 183 miles (tested) **Energy cost** 7.0p per mile **Miles this month** 358 **Total miles** 2919

Killer-grammes

Light, frugal cars like the Swift save the planet… so long as you can dodge being crushed by heavy cars. By **Ben Barry**

A remark by Euro NCAP's Michiel van Ratingen caught my eye. Increases in car weight are down to 'consumer preference for larger vehicles and to electrification, with ever bigger batteries being used to quell consumers' range anxiety… a trend that helps neither safety nor the environment.'

Of the link between weight and safety, NCAP highlights a report by the VIAS Institute in Belgium, which looked at real-world crash data. It says that if a 1600kg car and a 1300kg car collide, the risk of fatal injury decreases 50 per cent for those in the heavier vehicle while increasing almost 80 per cent for those in the lighter one.

It seems we're charging headlong into the wrong automotive cul-de-sac here. Choice is fast disappearing, with small, lightweight hatchbacks like the Ford Fiesta exiting the market because new regs make it hard to sell them profitably.

And yet Suzuki offers a range of lightweight, super-frugal cars. It's had to discontinue the Swift Sport to 'fully comply with all UK legislation' but the base Swift soldiers on.

It weighs just under a tonne, produces only 81bhp, manages 99g/km Co2 and routinely returns high-50s mpg (this month's 55mpg is a record best) thanks to its 1.2-litre three-cylinder mild-hybrid engine. And that's with me working it pretty hard to get anywhere. Pedestrians could probably stop it with an outstretched hand.

Despite measuring just 3890mm from tip to toe, the Swift can also package my wife and two secondary schoolers in comfort and even carries a decent amount of luggage, as a recent trip to the airport when we each had a large carry-on bag in the boot attests. It does 350 miles between fills that take no time at all because the tank holds just 37 litres.

There is, of course, one massive negative given the VIAS report – with such a feathery kerbweight, the prospect of getting in a head-on collision with an SUV or electric car (heaven forbid an electric SUV) just doesn't bear thinking about. Or makes me think about getting something bigger – the Swift gets three out of five stars from NCAP, incidentally.

We need more cars like the Swift, not fewer. Instead we're locked into a cycle of reducing grammes per kilometre while adding ever more kilos.

Suzuki Swift 1.2 Hybrid Ultra
Month 5

The story so far

Suzuki's eternal supermini
+ Light, frugal and easy to live with
- If only all cars were this responsibly sized

Logbook

Price £19,799 (£19,799 as tested) **Performance** 1197cc turbocharged three-cylinder, 81bhp, 12.5sec 0-62mph, 103mph **Efficiency** 64.2mpg (official), 54.9mpg (tested), 99g/km CO2 **Fuel cost** 10.9p per mile **Miles this month** 1355 **Total miles** 7313

Downsizing makes sense, so long as you're not the only one doing it

Rich Pearce

Goodbye

When it's good, it's great

If only Porsche hadn't made the Macan so compelling. By **Chris Chilton**

Alfa Romeo Stelvio Quadrifoglio
Month 7

The story so far

Alfa's hot SUV is big on thrills, but asks plenty in return
+ Handling; performance; gorgeous paint
- Ride, infotainment, depreciation, few dealers

Logbook

Price £87,195 (£90,745 as tested) **Performance** 2891cc turbocharged V6, 513bhp, 3.8sec 0-62mph, 177mph **Efficiency** 23.9mpg (official), 20.2mpg (tested), 267g/km CO2 **Energy cost** 34.0p per mile **Miles this month** 236 **Total miles** 9234

Unlike a lot of politicians I don't have to worry about people unearthing ludicrous after-hours ramblings in my ancient social media posts. But Giant Test verdicts from years back can sometimes seem just as jarring when viewed through modern eyes. As jarring as the ride on our long-term-test Stelvio Quadrifoglio, which made me wonder what I'd been smoking when I declared the pre-facelift Alfa a winner in a shootout with the Porsche Macan Turbo six years earlier.

Three days later I finally got the chance to send the Stelvio down a great road and it all came back. Even cooking Stelvios are fun to drive, thanks to their quick steering and even weight distribution. But the Quadrifoglio is something else. It's an animal, carving into corners like a mid-engined sports car and hurling itself out the other side and onto the next straight ready for you to grab another handful of the gorgeous metal shift paddles – which are fixed to the wheel and make using the column stalks annoyingly difficult, for an authentic Italian supercar experience.

I still think the Stelvio is sensational to drive fast, and a new differential on the rear of the facelifted car ups the joy quotient. But in six months of living with the refreshed Quadrifoglio, driving it for shopping and runs to the train station as well as driving it for fun, the opportunities to bring out the superhero side of it were too few, and the flaws in its basic make-up too hard to ignore.

Although Alfa has improved the handling (with the diff and suspension tweaks) and the styling (with LED headlights), and bumped the 2.9-litre V6's output up 10bhp to 513bhp, those were the bits that needed the least attention. The parts that were less than stellar back in 2018, but which I was willing to overlook in exchange for the

Alfa's improved the handling and added power, but those were the bits that didn't need fixing

Still a rare sight, but always a welcome one

Barry Hayden

dopamine kick of great chassis dynamics, are the bits that really needed the investment.

We've mentioned the crude ride, but the small, fiddly infotainment system also felt disappointingly unsophisticated. It has been updated since we first drove the car before the pandemic, but it might as well be a pushbutton AM radio next to the slick curved iDrive display on BMW's similarly-priced X3M. The digital instrument pack also lacks the configurability of rivals' systems, being unable to show a map, although the graphics take on a Lamborghini-like demeanour when you switch the driving mode dial to Race mode; fun, but not as helpful as a map.

I liked that the Stelvio still has physical rotary dials for the climate control, though I imagine they're only there due to the age of the base car, and the black leather sports seats looked and felt great whatever the journey length. The rear seats are short on SUV-type sliding and folding versatility, but the amount of space available isn't terrible. You could say the same for the overall quality of the cabin materials. Not bad, but rivals do it better.

I was also surprised at how rattly the bi-turbo V6 sounded at low speed, driving with the windows down revealing a pinking noise like an old car with its distributor set too advanced. The eight-speed auto's low-speed manners weren't great, either, and by the end of the loan the big drilled brake discs squeaked during parking manoeuvres.

The Stelvio went back to Alfa before I had the opportunity to book in the 9000-mile service that would have given the dealer a chance to check the brakes. I called Vospers of Exeter a month before the scheduled return but was told it couldn't get me in for six weeks. Alfa collected the car in five. It's worth noting that Porsche Macan and Cayenne models only need servicing every two years or 20,000 miles, and don't depreciate anywhere near as heavily.

Metal paddle is a glorious point of contact, something you'll want to use a lot

Still, I stand by that 2018 test verdict. The Quadrifoglio was and is more exciting and more charismatic to drive, turns heads and has a real feelgood factor, and those things have always been priorities for people who buy Alfas. But it's feeling its age in the other areas that matter when you're living with a car day in, day out. Porsche upgraded the Macan a couple of years ago and the top-spec GTS is £15k cheaper than the QF. Beguiling as the Stelvio is, I'm not sure I'd fancy its chances of taking it in a rematch.

Count the cost

Cost new £90,745 **Part exchange** £48,420 **Cost per mile** 34.0p **Cost per mile including depreciation** £4.51

Barry Hayden

Jordan Butters

Renault Clio TCe 90 Evolution
Month 8

The story so far

We're sorry to see our base-spec Clio go; affordable and simple by today's standards

+ Simple, functional, with a brilliant engine and gearbox

- I've lost friends by going on and on and on and on about it

Logbook

Price £17,995 (£18,695 as tested) **Performance** 999cc turbocharged three-cylinder, 89bhp, 12.2sec 0-62mph, 112mph **Efficiency** 54.3mpg (official), 44.4mpg (tested), 118g/km CO2 **Energy cost** 15.7p per mile **Miles this month** 1024 **Total miles** 8532

There's always that big question mark hanging over a long-term test car when we hand it back. 'Would you recommend it?' If your best friend asked about the car you've just lived with for six months, would you say 'Yes absolutely! Buy one!'? Or would you look at your shoes and mumble something about 'Other brands are available'?

Over the years, there have been a few long-termers that I've eulogised about. If anyone asks me to recommend a family estate, for example, it's always the Dacia Jogger, ever since I tested one for six months back in 2022. Over the last couple of years I've probably sold more Dacia Joggers than your average Dacia main dealer, I've gushed about it so much (you're welcome, Dacia).

But the Clio – oh, the Clio! It's taken things to a whole new level. With our orange Tic Tac I don't even wait to be asked. 'Lovely weather today,' a passing stranger will say. 'I think you should consider the Renault Clio TCe 90,' I reply. 'Can you help with my homework?' my daughter asks. 'The Clio TCe 90 is the answer,' I tell her. 'We think it's time you handed over the Clio,' the Renault press officer tells me, in an email. 'No, I think it's time YOU handed over the Clio,' I reply, confusing the hell out of him.

So yes, our Clio has been a hit.

It started as an experiment. So often, *CAR* ends up running top-of-the-range models, but

Goodbye

The answer to every question

A bare-bones hatchback executed so well it's a delight to drive and a pleasure to live with. By **Mark Walton**

with the Clio we deliberately went for the base-spec Evolution model with just one option added, the Valencia Orange metallic paint (£700). Over the last seven months that decision has shown, more than ever, that in the days of fully digital electric cars, less is more. The Clio's minimalist simplicity has been one of its greatest pleasures.

I never once thought, 'Gosh, I wish I had 12-way power-adjustable front seats with a massage function.' I don't want my windscreen-wiper preferences stored in the cloud, or a passenger-side infotainment screen. The Clio has a small but effective touchscreen in the middle of the dash and it has CarPlay. The seats are manual and so is the handbrake. I never wanted anything else.

Durability outweighs cabin fabric's slight lack of loveliness

Inside, the seat fabrics feel a little synthetic, but with dogs and kids climbing in and out they proved to be tough and easy to clean.

And at the centre of the whole experience is the engine-gearbox combination, a sensational 1.0-litre petrol three-cylinder with a six-speed manual. I know I've banged on about this, but it's so good and so much more fun than the 89bhp would suggest.

This powertrain – along with the quick, accurate steering – is what elevates the Clio above its mundane, budget status. When the Renault won our eight-car hatchback test last summer, some of its competitors felt like anaemic shopping trolleys (I'm looking at you, Toyota Yaris 1.5 Excel Hybrid). The Clio, in comparison, felt like the enthusiast's choice – a half-pint hot hatch in disguise.

No, wait, that's misleading. If you buy a Clio TCe 90 expecting a REAL hot hatch, you'd be disappointed. It has drum brakes and 150bhp missing. No, it's not a car for those who want to show off or drag race from traffic lights. But if you love driving and you get a kick from balancing a lightweight hatch on its tippy-toes while thrashing the living daylights out of a little engine, then this is the car for you.

There. I recommended it.

Count the cost

Cost new £18,695 **Part exchange** £13,550 **Cost per mile** 15.7p **Cost per mile including depreciation** 75.7p

Goodbye

Can't let go

Don't think of it as goodbye – think of it as time to start shopping around for something very similar. By **Ben Oliver**

Skoda Enyaq Coupe iV vRS
Month 7

The story so far

EV that's a great fit for real life

+ First EV we've run that feels unconstrained by range

- Brake modulation; Hankook tyres; odd 'crystal' grille

Logbook

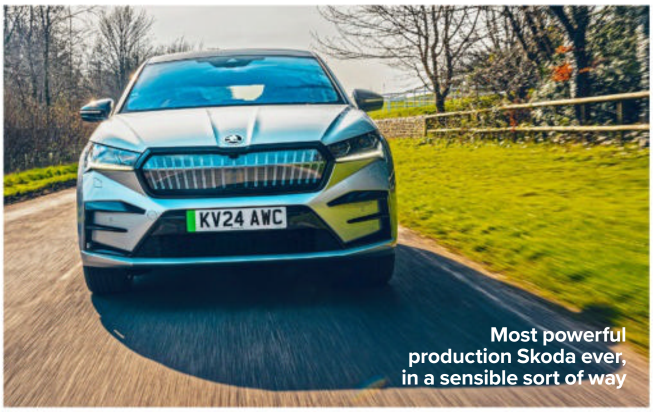
Price £54,155 (£58,800 as tested) **Performance** 77kWh battery, twin e-motors, 5.5sec 0-62mph, 111mph **Efficiency** 3.9 miles per kWh (official), 3.5 miles per kWh (tested), 0g/km CO2 **Range** 336 miles (official), 270 miles (tested) **Energy cost** 8.7p per mile **Miles this month** 2103 **Total miles** 10,359

When you live with a car like this Skoda Enyaq for a few months you wonder why anyone who can afford to go electric hasn't by now, and why sales of electric cars are in decline in major European markets. I mean, how much better do you need your daily driver to be? On top of near-silent operation, sports-car pace, a real-world 270-mile range, cheap energy if you charge at home, great design, solid build quality and relative affordability, what else do you want? A chauffeur? Skoda to pay you?

I'm oversimplifying, of course. It's not just about the product. Volatile energy prices, the removal of subsidies and the still-unsatisfactory nature of the charging network are all major influences too, and if we want EV uptake to increase significantly we also need significantly cheaper EVs.

They're coming. My point is simply that when the product is this good at existing price points, sales shouldn't be stalling. At least EV adoption is still growing here in the UK, if not as quickly as politicians want and the car makers need.

I'm about to become part of those growth statistics. The range-topping vRS we ran as a family car went back to Skoda this morning, and we liked it so much that much of today was spent shopping for one of our own. Despite the vRS being the most powerful, fastest-accelerating production Skoda ever, you can get one on a standard three-year, 10,000-mile PCP deal for under £500



Most powerful production Skoda ever, in a sensible sort of way

Rich Pearce

per month, and business leases are even cheaper.

I found the Enyaq pretty hard to fault as a family EV, but I'm not sure I'd pick this exact model when spending my own money. In the Enyaq's facelift at the start of 2024 the 80 version with the same 77kWh battery as my vRS became the 85 and saw its power leap by 81bhp. It claims 348 miles on a charge – officially 12 miles more than the vRS but essentially the same in daily use – and so I wonder if the 85 or the all-wheel-drive 85x might be the sweet spot in the range.

But having thought myself terminally allergic to coupe-SUVs like this vRS on philosophical grounds, I'm surprised to find myself considering another one, rather than the estate-SUV option. Despite hauling bikes, dogs and the assorted baggage of a four-strong family, the coupe's boot coped with everything. And partner Sophie (who's paying for half of whatever we buy) sees a difference between the two Enyaq body styles which I just don't: for her the estate version is middle-aged family transport and the coupe far more stylish.

We'll argue that one out, but we're agreed that of the five EVs we've run as family cars, this was the first time we've felt unconstrained by driving electric: a combination of small improvements in the charging network but more importantly a small but significant difference in the real-world range this Enyaq delivers. Getting an actual, reliable 270 miles from a full charge means you can drive for way longer than you'd want to without a break for a coffee and a pee. Those extra miles also give you an exponentially greater choice of charge points, including the option of going a bit further to one where the electricity is cheaper or flows faster.

In actual use, this meant we could do our regular schlep from the South Coast to ▶

I thought I was terminally allergic to coupe-SUVs like this but I find myself considering buying one

You hang up. No, you hang up. No, go on, *you* hang up, etc

Rich Pearce

Yorkshire to see family on a single charge and with 50 or miles left for running around when we got there, whereas we'd previously had to divert off the M1 to Gridserve's 12 350kW chargers at Rugby services on the M6. On the long drive down to the Massif Central to watch the Tour de France, we didn't have to plan recharging stops as our bodies needed recharging before the Skoda did, and every French service station seemed to have an excess of rapid chargers.

And the car itself? I have very few notes. Fast, comfortable, very refined and good-looking. Nothing went wrong. The infotainment system remains slightly counter-intuitive but we just used Apple CarPlay like everyone else. The odd brake modulation, requiring a much firmer shove than expected for final retardation, isn't great but just takes a bit of getting used to, and seems to be shared with other VW Group products on this platform. And I still don't like the road feel and poor-surface grip afforded by the Hankook tyres, but was somewhat reassured recently to see that BMW is fitting them to the M5 wagon.

Skoda surely the manufacturer most committed to the concept of the cubby

> **We could do our regular schlep from the South Coast to Yorkshire on a single charge**

Deliberations continue on what to replace the Enyaq with, but other than a Polestar or maybe another Kia EV6, its main rivals are all VW Group products. We've been lucky to be the beneficiaries of former CEO Herbert Diess's bold decision to go hard and early on EVs, and do them properly: thus far it's worked out rather better for us buyers than for him or the company.

Count the cost

Cost new £58,800 **Part-exchange** £34,850 **Cost per mile** 8.7p **Cost per mile including depreciation** £2.40

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A22 LES	£1300
G24 LES	£1700
J24 LES	£1100
S28 LES	£1400
L121 LES	£1300
A12 LEW	£1600
8720 LG	£1700
A25 LLA	£1500
E22 LLY	£1300
A26 LLY	£975
847 LOR	£3300
K2 LOU	£2700
A26 LOU	£1700
P31 LOU	£1500
G21 LOW	£1800
A21 LYN	£2200
D26 MAD	£1600
Y7 MAJ	£1200
C20 MAL	£1500
D21 MAL	£1400
G21 MAL	£1300
H21 MAL	£1200
J23 MAL	£975
G21 MAR	£1200
J21 MAR	£1200
C23 MAR	£1100
A26 MAS	£975
B23 MAT	£1200
E23 MAT	£1300
W10 MAX	£3500
D21 MAX	£1800
G21 MAX	£1600
H21 MAX	£1500
A24 MAX	£1700
B11 MAY	£1600
C21 MAY	£1400
D21 MAY	£1400
G21 MAY	£1300
A24 MAY	£1300
MB 517	£11500
S111 MCA	£1500
X6 MCC	£1300
A6 MCE	£975
D26 MCK	£975
A25 MED	£2200
D26 MEG	£1300
H26 MEG	£1500
C80 MEG	£1400
J123 MEG	£1100
D21 MEL	£1700

REGISTRATIONS URGENTLY WANTED FOR IMMEDIATE PURCHASE

R2 GGS	£975
GIL 430	£1400
GK 776	£5900
GM 6618	£2900
J11 GUY	£1300
A22 GUY	£1200
C26 HAD	£1300
J1 HAL	£1800
G22 HAN	£1200
F26 HAN	£1100
D21 JAN	£1900
G21 JAN	£1800
Y22 JAN	£1400
B44 JAN	£1700
T66 JAN	£1700
B92 JAN	£1300
Y222 JAN	£975
E19 JAS	£1500
C21 JAS	£1500
D21 JAS	£1500
D24 JOE	£1400
E24 JOE	£1300
T4 JON	£2600
E21 JON	£1600
H21 JON	£1400
A23 JON	£1400
G23 JON	£1200
D24 JON	£1300
K100 JON	£1100
S999 JON	£1200
C26 LAN	£1200
A25 LAU	£1500
E21 LAW	£1400
G21 LAW	£1500
D24 LAW	£1400
J24 LAW	£1500
M66 LAW	£1600
S66 LAW	£1600
W6 LCW	£1100
A25 LDO	£975
B21 LYN	£1400
C21 LYN	£1900
D21 LYN	£1800
F21 LYN	£1900
H21 LYN	£1400
G23 LYN	£1500
B7 MAC	£3100
N23 MAC	£1400
R23 MAD	£1500
A25 MAD	£1700
G23 MEL	£1500
C24 MEL	£1600
L21 MES	£975
A24 MET	£1500
W6 MEW	£975
D9 MEW	£1200
A26 MEY	£1200
P9 MGB	£1100
R1 MGF	£1500
B21 MJB	£1300

G21 MJB	£1200
F11 MJC	£1500
A25 MJC	£1400
E26 MJC	£1200
S111 MJC	£975
K121 MJH	£975
T31 MJS	£975
1333 ML	£2900
A25 MMO	£1300
MMW 157	£1700
E24 MMY	£1300
S28 MMY	£3500
A8 MNT	£975
185 MOE	£1500
A26 MOR	£1200
A26 MOS	£975
D26 MOT	£975
MR 479	£6600
Y7 MRJ	£1300
W1 MSW	£1300
7981 MT	£2200
5882 MU	£1200
681 MW	£7500
D21 NAH	£1100
H24 NAS	£1200
J50 NAS	£1900
C21 NAT	£1300
H21 NAT	£1200
E23 NDA	£1200
C25 NDY	£1300
D25 NDY	£1200
D24 NEL	£1100
A26 NES	£975
A26 NET	£1200
E7 NEV	£975
H24 NKY	£1300
C26 NKY	£1200
340 NOR	£2100
A26 NTH	£1200
J5 OAN	£2500
N12 OEL	£1300
C25 OKE	£1100
D24 OLL	£975
H26 OLY	£1200
W80 ONG	£1200
L7 OWL	£1200
M4 PAG	£1400
X7 PAH	£1400
W8 PAH	£1200
N2 PAM	£1400
H8 PAM	£1400
F11 PAM	£1400
G21 PAR	£1100
B25 PAR	£975
C26 PAR	£975
N1 PAT	£2900
K8 PAT	£2100
R9 PAT	£1900
C18 PAT	£1500
M19 PAT	£1600
K24 PAT	£1100
J28 PAT	£1400
PAT 95W	£1300
9214 PE	£1700
PEB 308	£1300
H5 PEG	£975
908 PF	£2800
2969 PG	£1400
5173 PG	£1300
8663 PG	£1500
8298 PH	£1600
9256 PJ	£1200
PJW 467	£2700
9481 PK	£1400
9799 PL	£1300
PM 527	£9300
C7 PMW	£1400
5085 PP	£1400
6525 PP	£1600
PRU 684	£1600
8750 PW	£2100
1368 R	£3300
A24 RAB	£1200
RAJ 86C	£1200
C25 RAM	£1200
P6 RAS	£975
K14 RAY	£1500
D18 RAY	£1700
A24 RAY	£1300
B24 RAY	£1600
T26 RAY	£1100
S29 RAY	£1200
M50 RAY	£1400
J90 RAY	£1200
RAY 97W	£1200
RAY 350	£2700
RBO 329	£1300
K1 RBW	£1200
B24 RBY	£1400
B25 RBY	£975
A9 RCB	£975
RD 4041	£2500
H3 RDG	£975
F25 RDY	£975
31 RE	£11500
675 RE	£4500
907 RE	£4200
RE 1896	£1900
5304 RE	£1700
REB 855	£2500
F25 RED	£2500
A21 REN	£1400
B25 REN	£975
A26 REN	£1200
C1 REP	£2100
B21 RES	£1300
A4 RET	£1100
B25 RET	£1200
RGR 274	£1200
845 RHA	£1300
RIA 65	£4700
RJ 951	£7900
D21 RJB	£1200
A26 RJB	£975
B4 RJT	£1500
P24 RKR	£1500
L1 RKS	£1800
RL 7024	£3100
B24 RLY	£1300
RM 9807	£2900
S3 RMH	£1300
J31 RMY	£1300
K21 ROB	£1500
J23 ROB	£1500
A24 ROB	£1600
L100 ROB	£1100
K121 ROB	£975
J200 ROB	£1200
R40 ROD	£975
ROD 847	£1600
RON 49Y	£1700
RON 242	£2300
RON 853	£1900
W1 ROS	£3700
M16 ROS	£1200
A21 ROS	£1400
C22 ROS	£1200
V2 ROY	£1800
ROY 8W	£3300
M12 ROY	£1500
S15 ROY	£1300
F19 ROY	£1400
A21 ROY	£1800
ROY 66W	£1200
ROY 674	£1900
T7 RRW	£975
G322 RRY	£1200
B26 RTY	£1400
677 RU	£1900
809 RU	£1700
S8 RUN	£1800
C21 RUS	£1300
B23 RUS	£1100
4018 RW	£2100
5321 RW	£2300
A25 RYN	£1200
A22 SAL	£975
C24 SAM	£2100
E24 SAM	£1600
A26 SAM	£3300
B26 SAM	£1700
F26 SAM	£1900
H26 SAM	£1800
SAM 33S	£4300
B3 SAN	£2900
B11 SAN	£1500
H24 SAR	£975
C26 SAR	£1500
123 SBE	£1700
S3 SCA	£1400
A25 SEB	£975
H2 SET	£1300
R23 SHA	£2500
H26 SHA	£1500
A21 SHE	£1500
SHE 52S	£1200
A26 SHH	£975
X5 SHR	£975
A23 SJB	£975
A26 SJC	£1300
E26 SJC	£1100
E21 SJH	£975
G21 SJH	£1200
H26 SJM	£1300
D26 SJW	£975
A26 SKY	£1100
SLK 1E	£3500
SP 2566	£3900
T3 SPY	£1700
E25 SRA	£1600
D4 SRB	£1300
ST 8438	£3500
STR 1N	£3400
STT 347	£975
J17 STU	£1600
C26 STU	£1600
D41 STU	£1500
STY 15	£3300
A24 SUE	£1700
F24 SUE	£1300
H24 SUE	£1100
SUE 59G	£1700
SUE 79W	£1700
SUE 82R	£1700
SUG 383	£975
R4 SUN	£1700
SYA 441	£1200
D5 TAF	£1500
A26 TAN	£975
H26 TCH	£1500
R6 TDW	£1200
TEG 252	£1500
E25 TEL	£1400
H25 TEW	£1300
A25 TOM	£2300
C26 TOM	£2100
J400 TOM	£1100
B25 TON	£1500
C25 TON	£975
5316 TR	£1700
TRU 92	£2900
TRW 164	£1900
TS 5840	£2600
G4 TUG	£1300
K15 TVN	£1500
UAR 196	£1100
ULL 871	£975
UN 1444	£1500
UPE 885	£975
S3 VAL	£2900
L5 VAL	£1600
W5 VAL	£1600
C14 VAL	£975
263 VAL	£1700
E23 VAN	£1200
C26 VEN	£1400
VP 6698	£1500
544 VPB	£975
386 VY	£2300
15 WAE	£2500
WC 77	£9500
1947 WD	£1900
16 WE	£12500
B21 WEB	£1500
G25 WEB	£1600
A26 WEB	£1500
C26 WEB	£1500
D26 WEB	£1400
G26 WEB	£1400
WG 3646	£1500
WGH 930	£1500
WIL 780	£1400
S1 WJH	£1500
WKX 99	£1500
W2 WRX	£1500
WSD 913	£1500
L23 WYN	£1100
XJI 10	£2500

GBU

HOW DOES GBU WORK?
CAR's road testers highlight what's so good about the best cars in every class... and what could be better

The Good, the Bad & the Ugly: The Top 5s

TOP 5 HOT HATCHES

30 years since the Integra Type R debuted, Civic carries the torch

GIANT TEST WINNER

1

HONDA CIVIC TYPE R

THE GOOD: Feel, feedback, focus: a phenomenal full-sized hot hatch

THE BAD: Now £50,050 for a front-drive hatchback with barely any more power than before

THE UGLY: Probably the last of its kind; good job it's one of the best

THE ONE TO BUY: There's just the one model; £459 a month on a three-year PCP with an £11k deposit

GIANT TEST WINNER

2

TOYOTA GR YARIS

THE GOOD: A modern-day rally homologation special that's thrilling to drive

THE BAD: Road noise like a death-metal gig; joke rear seats

THE UGLY: Long waiting list, even with some versions priced at £60,000, although it starts at £44,250

THE ONE TO BUY: Now has optional auto but go for the manual

3

AUDI RS3

THE GOOD: Want a five-cylinder hot hatch? Your option is RS3, with five or four doors

THE BAD: Now £60k; small boot for both

THE UGLY: It's better than before, but improved S3 looks like superior value

THE ONE TO BUY: £60,105 for the hatch; an extra grand for the saloon

JUST UPDATED

4

VW GOLF GTI CLUBSPORT

THE GOOD: Rare mix of supreme comfort, hatchback versatility and cornering bite

THE BAD: The stats don't really shine in a 2025 context

THE UGLY: Mk8.5 a definite improvement, but interface still offers plenty to gripe about

THE ONE TO BUY: £42,155 for a very good Golf is pretty decent value

EV CHOI

5

VW CUPRA BORN

THE GOOD: Cupra at its best, making a real difference to VW component parts; fun to drive and decent battery range

THE BAD: Vague brakes – not what you want on a hot hatch

THE UGLY: Some lingering traces of ID. 3

THE ONE TO BUY: VZ starts around £45k, with 372-mile range and 321bhp

TOP 5 SPORTS CARS

911's winning streak stretches on towards infinity

GIANT TEST WINNER

1

PORSCHE 911

THE GOOD: Exquisite blend of power, accuracy, excitement, style and usability, and new GTS integrates hybrid beautifully

THE BAD: You have to look down to #3 in this category to see the affordable performance Porsche; 911 barely scrapes in at just under £100k

THE UGLY: It keeps getting bigger and heavier

THE ONE TO BUY: That basic Carrera is ace, and it's hard to imagine you'll regret it for a minute. But if you want more power and more trickery then Porsche has plenty of ways to take more of your money

GIANT TEST WINNER

2

ARIEL ATOM

THE GOOD: A beautiful object as well as a thrilling drive; think of it as a modernised Lotus Seven crossed with a high-end sportsbike

THE BAD: You'll need bike-style wet-weather gear if it's raining. And at least £40k – this is an expensive toy, if a captivating one

THE UGLY: The 4R is even more bonkers

THE ONE TO BUY: Do you really need the 350bhp power upgrade option?

GIANT TEST WINNER

3

PORSCHE 718 CAYMAN/BOXSTER

THE GOOD: Sublime handling; surprising practicality

THE BAD: Less characterful than an Alpine; such an obvious choice it's almost boring

THE UGLY: Flat-four versions sound like a VW Beetle in a duet with Eeyore

THE ONE TO BUY: GT4 RS the most thrilling, Spyder is ace, but flat-six GTS 4.0 is a cut-price GT4 at £75k

4

LOTUS EMIRA

THE GOOD: The first new combustion Lotus in years is fantastically well resolved. Usable, desirable and thrilling

THE BAD: Harder work to live with than a Cayman

THE UGLY: The last petrol Lotus – just as the company gets the financial stability to build on its brilliance

THE ONE TO BUY: AMG-sourced four is an interesting but pricey addition

5

ALPINE A110

THE GOOD: The perfectly formed antidote to a world of excess; a modern classic in every sense of the term

THE BAD: Two boots, neither big, and not much oddment storage inside

THE UGLY: 'R' is 34kg lighter – some effort – but also nearly £100k. Too much

THE ONE TO BUY: A110 S adds handling poise for £67,490 but £54,490 base A110 is all you need

TOP 5 GRAND TOURERS

GIANT TEST WINNER
1

FERRARI ROMA

THE GOOD: Style, speed and sensuous lines; a car for, and from, a bygone age

THE BAD: An age in which we no longer live, tragically

THE UGLY: Baffling steering-wheel touchpads; strangled exhaust note

THE ONE TO BUY: The cabrio. Arguably even more beautiful, until you sit in it, that is

BENTLEY CONTINENTAL GT

THE GOOD: Luxury, power, agility and a great-looking body

THE BAD: Nope, it's really sorted

THE UGLY: Just because it's always been heavy and thirsty won't stop us complaining that it's heavy and thirsty

THE ONE TO BUY: New plug-in range-topper is the most powerful Bentley ever, and so much more besides

GIANT TEST WINNER
3

PORSCHE 911 TURBO

THE GOOD: Hypercar-bothering pace, any road, any weather

THE BAD: Only fun when you're really going for it

THE UGLY: Turbo has never been good for depreciation; even less so recently

THE ONE TO BUY: Entry car plenty fast enough but £180,600 Turbo S outsells it; add £10k for a Convertible

PORSCHE TAYCAN CROSS TURISMO

THE GOOD: Raised ride height absolutely monsters lumpy UK roads

THE BAD: Not actually that practical

THE UGLY: Audi's e-Tron GT gets the nicer cockpit

THE ONE TO BUY: Revised versions has arrived, along with revised prices: 4S Cross Turismo is now £100,400, and range hits £162k

ASTON MARTIN DB12

THE GOOD: Effortlessly beautiful DB11 replacement now has the traction to make the most of the rampant turbo V8's stomp. Excellent new interior

THE BAD: Overshadowed by the success of DBX

THE UGLY: Aston simply doesn't do ugly

THE ONE TO BUY: Coupe is £185k; Volante the stunner

TOP 5 COUPES AND CABRIOS

BMW M2

THE GOOD: The longitudinal-engined two-door BMW coupe lives

THE BAD: Bigger and heavier than we'd like but outrageous fun

THE UGLY: You need £66k to get involved; steering a shade rubbery

THE ONE TO BUY: Manual or auto transmission options – get the knob. We'd go M carbon seats, too

MASERATI MC20

THE GOOD: A no-excuses excellent Maserati. Handling and ride to match the looks; a GT as well as a sports car

THE BAD: Throttle could be sharper in normal mode

THE UGLY: Convincing your mates you did mean to buy the Maser and not the 296

THE ONE TO BUY: The droptop Cielo. All the coupe's go with added style

MERCEDES-AMG SL

THE GOOD: Latest SL is developed by AMG but it's still a cruiser, and all the better for it

THE BAD: Engines are still better than the ride and handling

THE UGLY: Cabin designed by touchpad scattergun

THE ONE TO BUY: The £148k, 469bhp SL55; also look at the coupe cousin, the AMG GT

MAZDA MX-5

THE GOOD: Closest thing to a modern-day Lotus Elan; genius folds-flat-in-seconds roof

THE BAD: Lashings of bodyroll; the 1.5 can't climb hills

THE UGLY: If you're over 6ft tall you simply won't fit

THE ONE TO BUY: Motorised-metal-roof RF doesn't quite make sense; 1.5 starts at £28k, punchier 2.0 from £32k with an LSD

ASTON MARTIN VANQUISH

THE GOOD: Fast and comfortable, and utterly gorgeous

THE BAD: Gets very thirsty without too much provocation

THE UGLY: DB12 and Vantage are also very good

THE ONE TO BUY: £333,000 will get you a very fine long, low, two-seat sports car/GT/near-supercar coupe

PCM (per calendar month) figures are typical prices for PCP (personal contract purchase) deals available at the time of writing. For guidance only

TOP 5 SUPERCARS

FERRARI 296 GTB

THE GOOD: Timeless styling and a driving experience as good as any of Maranello's finest

THE BAD: You need reflexes like a fighter pilot to drive it as fast as it can go

THE UGLY: Touch-sensitive steering-wheel pads make the interface borderline unusable

THE ONE TO BUY: Fiorano pack is £25k+ overkill. GTS adds sunshine

PORSCHE 911 GT3 RS

THE GOOD: Spine-tingling sound; 9000rpm redline; total immersion

THE BAD: Nothing to see here

THE UGLY: Getting on the waiting list is like winning both *The X Factor* and *The Apprentice*

THE ONE TO BUY: RS is somehow more focused than the GT3 but more road-compliant at the same time. How do they do it?

LAMBORGHINI REVUELTO

THE GOOD: The monstrous, naturally-aspirated V12 lives on – now e-boosted and wrapped in such a hard-to-crash package insurance should be a tenner. Vastly improved cabin, too

THE BAD: Price has skyrocketed

THE UGLY: EV-only range is six miles

THE ONE TO BUY: There is only one for now

McLAREN 750S

THE GOOD: Lighter, more powerful, better: evolution of 720S is another corker from Woking

THE BAD: 30 per cent new but you'd struggle to tell

THE UGLY: Convincing your mates you actually bought the new car

THE ONE TO BUY: Stick to the comfort-spec seats and avoid the harnesses on the top 'super carbon' ones

CHEVROLET CORVETTE Z06

THE GOOD: A beautifully balanced performance package that can stand tall among the supercar aristocracy

THE BAD: Interior quality and kit not quite there

THE UGLY: Will future electrification kill the thrill?

THE ONE TO BUY: Add the Z07 pack for upgraded aero, suspension, brakes and wheels; expect to pay £140k

TOP 5 PLUG-IN HYBRIDS

GIANT TEST WINNER
1

BMW X5 50e

THE GOOD: Massive 67-mile official e-range; horizon-eating performance

THE BAD: Hybrid hardware cuts into boot space to the tune of 150 litres; no seven-seat option

THE UGLY: Not much now that the facelifted 50e model with more e-range and power is here

THE ONE TO BUY: This one, for £82k

FORD KUGA

THE GOOD: Facelift has brought better efficiency, and it still drives very well

THE BAD: Electric-only range isn't great, although fuel consumption's good

THE UGLY: Not so much ugly as dowdy, particularly the interior – not a patch on the electric Explorer

THE ONE TO BUY: PHEV in ST-Line X trim can be had for £39,755

PORSCHE CAYENNE

THE GOOD: Handling; driver focus; choice of body styles; 0-62mph in 5.0sec

THE BAD: Bigger battery for facelift model but still can't match the X5

THE UGLY: The front passenger touchscreen: £1000 and not needed

THE ONE TO BUY: If you value the U in SUV, avoid the coupe – even if it is a great steer

VOLKSWAGEN TIGUAN

THE GOOD: Mk3 is bigger than ever but still a neat all-round package. Choice of 201 and 268bhp PHEVs, both with 62-mile e-range

THE BAD: Room for improvement with the infotainment

THE UGLY: People are buying Tiguans instead of Golfs, in huge numbers

THE ONE TO BUY: Go for either of the eHybrids in good-value Match trim

BMW 330e

THE GOOD: Goes sub-six to 62mph and up to 41 electric miles on a charge

THE BAD: Engine is slightly coarse; plain 330i is less heavy, more fun

THE UGLY: Hybrid kit eats into boot space so regular 3s are roomier

THE ONE TO BUY: Choice of saloon or estate. Handsome, vaguely affordable 330e Sport Touring is £48,785

TOP 5 ELECTRIC CARS

And the winner of just about everything is... the Renault 5

RENAULT 5 E-TECH

THE GOOD: The way it looks, the way it drives, the keen pricing – but it's also refreshingly practical, with five doors, a usable rear bench, and good efficiency, too

THE BAD: Fiddly gear selector stalk; no frunk

THE UGLY: What ugly? Look at it

THE ONE TO BUY: Entry point is £22,995 but we'd splash a few more grand on mid-spec Techno, which gets the '5' charging indicator on the bonnet and other desirable bits of kit, plus the option of the bigger battery, 52 rather than 40kWh

GIANT TEST WINNER
2

HYUNDAI IONIQ 5 N

THE GOOD: Electric and exciting – synthetic drive modes and gearchange are game changers

THE BAD: Breadth of configurability takes getting used to. Ignore that it's software-driven – it feels real

THE UGLY: Interior quality below par for a £65k car

THE ONE TO BUY: Just one model; paint and a sunroof the only options – all the drive modes are included

PORSCHE TAYCAN

THE GOOD: Totally overhauled but still fast, responsive and fluid; now more efficient

THE BAD: Info screen in front of the passenger is faintly ridiculous

THE UGLY: Prices are all up

THE ONE TO BUY: Prices start at £86.5k for the rear-drive basic Taycan; you can pay a lot more and get a bit more performance

KIA EV3

THE GOOD: Roomy and clever interior; great value for such long range; funky looks – it's a shrunken EV9 or EV6

THE BAD: Air trim feels cheap inside

THE UGLY: That weird climate-control screen

THE ONE TO BUY: The 270-mile-range car is brilliant value but most will want the longer-range option. GT-Line is our pick for value-to-comfort goodness

GIANT TEST WINNER
5

RENAULT SCENIC

THE GOOD: Good value; long range; pleasant to drive; looks smart inside and out

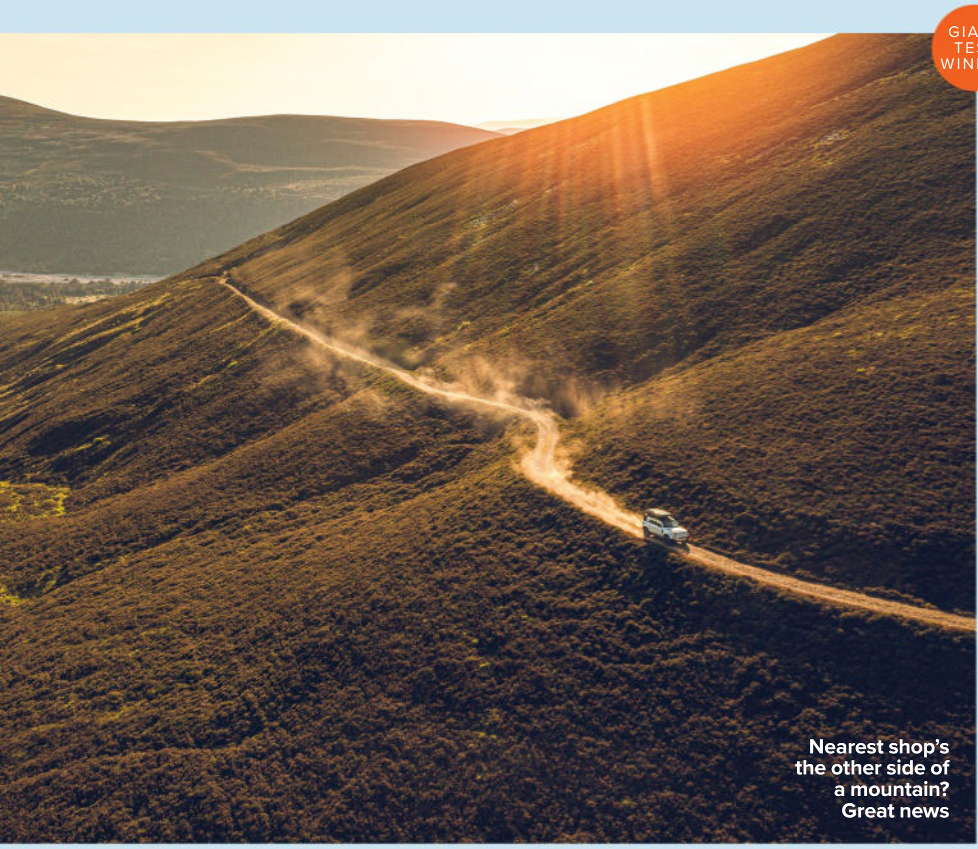
THE BAD: Sometimes lumpy ride; poor rear visibility; rear seats don't slide or do other family-friendly tricks

THE UGLY: The boot is very deep, but not actually that big, and you have to pay extra for a variable floor

THE ONE TO BUY: Go for the big battery in Techno trim

PCM (per calendar month) figures are typical prices for PCP (personal contract purchase) deals available at the time of writing. For guidance only

TOP 5 SUVs/CROSSOVERS



Nearest shop's the other side of a mountain? Great news

1

GIANT TEST WINNER

LAND ROVER DEFENDER

THE GOOD: Reboot brings untold dynamic improvements wherever you drive

THE BAD: Second-row access is a pain in the 90; expensive; 130 in particular is very big, so parking can be tricky

THE UGLY: Very nice inside, so you're wary of getting it muddy

THE ONE TO BUY: Range spans 90, 110 and 130 bodies, with significantly different dimensions but remarkably similar character and the genuine off-road ability that Land Rover always delivers so convincingly. Heart says petrol V8 90, head/wallet say diesel-six D250 110

2

EV CHOICE

PORSCHE MACAN

THE GOOD: The new one is electric – and as impressive as the outgoing combustion version

THE BAD: As family transport it has its shortcomings, especially boot space

THE UGLY: If you want an engine you'll need to be quick

THE ONE TO BUY: Starts at £67k and goes up to £95k for the Turbo; £70k 4 offers all you could sensibly want

3

GIANT TEST WINNER

ASTON MARTIN DBX 707

THE GOOD: Now with a much improved interior, the DBX keeps the glorious noise, masterful balance, rear-axle bias and surprising practicality

THE BAD: High fuel consumption and emissions from the twin-turbo V8

THE UGLY: There's no longer a non-707 version, so you need to pay top dollar

THE ONE TO BUY: The 707 will cost you around £210k

4

MERCEDES G-CLASS

THE GOOD: Rejigged range spans diesel, petrol, AMG and EV, and they're all good: agile off-road, smooth and comfy on-road

THE BAD: It's all a bit fancy; how do you feel about muddy wellies?

THE UGLY: Merc's premium mission means it's a posh version or nothing

THE ONE TO BUY: Electric is astonishingly good, but painfully expensive at £180k-plus

5

INEOS QUARTERMASTER

THE GOOD: Pick-up version of the Grenadier has a long wheelbase that if anything improves the handling

THE BAD: Not very roomy for passengers

THE UGLY: Isuzus are much cheaper

THE ONE TO BUY: Prices start at £66k, but a Trialmaster edition at £74k brings together a practical and good-looking set of extras

TOP 5 LUXURY CARS

GIANT TEST WIN
1

RANGE ROVER

THE GOOD: Masterful and hugely desirable reinvention of an icon. An EV version is due soon

THE BAD: Reliability remains a worry. EV could be v v heavy

THE UGLY: The D350 mild-hybrid straight-six diesel is sublime. Can you live with the guilt?

THE ONE TO BUY: The above (from £107k), though the V8 is fun

ROLLS-ROYCE PHANTOM

THE GOOD: Money-no-object pinnacle of serenity and craftsmanship

THE BAD: Is this really you? And is this really appropriate in 2025?

THE UGLY: Filthy-money associations

THE ONE TO BUY: It's 'standard' or long-wheelbase, from £380k. All cars are built to order and most owners spend £500k

BENTLEY FLYING SPUR

THE GOOD: Now a hybrid V8, the Spur has great performance and poise plus decent e-range

THE BAD: Other VW Group cars get even smarter chassis tech

THE UGLY: Lots of emphasis on expensive options

THE ONE TO BUY: Go for the Speed, from £266,500

MERCEDES S-CLASS

THE GOOD: Tech-fest with timeless waftability. Few cars are more calming

THE BAD: Surprisingly unrefined petrol six; doesn't ride as well as it should

THE UGLY: Trying not to crash while using the Hyperscreen

THE ONE TO BUY: Hybrid 580e works best. That's £114k in entry AMG Line Premium trim

ROLLS-ROYCE SPECTRE

THE GOOD: A joy to drive, and exquisitely built

THE BAD: Efficiency not great

THE UGLY: Fabulous detailing and engineering will benefit so few

THE ONE TO BUY: It's £330k in theory, but in reality, as every one is spec'd from a large and flexible options list, it's going to cost you more than £400,000

TOP 5 FAMILY CARS

BIG SELLER
1

BMW 3-SERIES

THE GOOD: On-the-deck driving position; dreamy handling balance; slick interior

THE BAD: Knowing you've made the obvious choice

THE UGLY: You'll need an M340i or M340d for six cylinders

THE ONE TO BUY: 330e if you want a hybrid; 320i if you're on a budget

GIANT TEST WINNER
2

BMW 5-SERIES

THE GOOD: Much has changed; still great. Handling defines the class

THE BAD: It's grown to become a very hefty car

THE UGLY: Is nowhere safe? Even the tradition-embracing 5-series gets a full EV option in the form of the i5

THE ONE TO BUY: Prices start at £51,915 for the 520i but can easily exceed £80k

DACIA JOGGER

THE GOOD: Seven seats; massive boot with the rear row removed; prices start just over £18k

THE BAD: Sandero base means it's a bit narrow; spartan

THE UGLY: Low Euro NCAP score, although it's pretty safe in a crash

THE ONE TO BUY: Hybrid usefully punchier than petrol, but much clunkier. PCP a steal at £166 a month

VOLKSWAGEN ID. 7

THE GOOD: The most coherent ID to date now in a choice of hatch and estate. Not posh, but highly agreeable

THE BAD: Frumpy styling and that still sub-par interface

THE UGLY: So few electric estates to choose from

THE ONE TO BUY: Pro Match with 77kWh battery does the job just fine, priced from £51,500 for the hatch

SKODA KODIAQ

THE GOOD: New version builds on the Mk1's strengths: roomy, comfortable, decent value

THE BAD: Not the most responsive steering

THE UGLY: Awkwardly, the diesel is the best engine

THE ONE TO BUY: Range starts at £26,645, but the smart choice is the 2.0-litre TDI in SE trim at £38,805

TOP 5 FAMILY HATCHES

BMW 1-SERIES

THE GOOD: Premium and practical, and a lot more normal than the original 1-series

THE BAD: Actually a bit too normal for some tastes

THE UGLY: Facelift has dialled down the ugly, thankfully

THE ONE TO BUY: Choice of £30k mild-hybrid front-drive 120 and £41k all-wheel-drive 296bhp M135; very different, both good

PEUGEOT 208

THE GOOD: Style; big-car character; knockout interior; EV version available

THE BAD: So-so handling; a squash for adult rear-seat passengers

THE UGLY: Dumping the wheel in your lap like a TV dinner to see the dials clearly

THE ONE TO BUY: Range from £21k, but £26k GT is worth saving up for. Bright colour is best

GIANT TEST WINNER

MINI COUNTRYMAN

THE GOOD: Wonderful interior and all-round feelgood factor from big new five-door

THE BAD: You need to be in the mood for the built-in zaniness

THE UGLY: Options can send the price into the stratosphere

THE ONE TO BUY: Your basic Countryman C Classic is just fine at a sniff under £30k

VOLKSWAGEN GOLF

THE GOOD: Brain-out default choice still a solid all-rounder; ride, visibility, roominess

THE BAD: Seat Leon a very similar package for a lower price

THE UGLY: Revised Mk8.5 version imminent, so supplies are patchy

THE ONE TO BUY: 1.5 TSI 150 at £300pcm or £28k; roomy estate is also great value

RENAULT CLIO

THE GOOD: Still fun to drive, and pretty practical for young families

THE BAD: Not actually very quick

THE UGLY: An even simpler, more basic version would be welcome

THE ONE TO BUY: No need to go higher than the base Evolution spec and an 89bhp TCE 90 three-cylinder engine, yours for £18k/£191 a month

TOP 5 SPORTS SALOONS

GIANT TEST WINNER

BMW M3/M4 COMPETITION

THE GOOD: Mighty straight-six; front axle's never-give-up attitude; dreamy chassis balance

THE BAD: No manual; nearly 911 money now

THE UGLY: M3 Touring £88k new but now changing hands for much less

THE ONE TO BUY: The CS, if you were lucky enough to bag one of the 100 brought here. Used Touring is a good secondhand buy

MERCEDES-AMG S63

THE GOOD: V8 plus e-motor shows AMG can do a great performance hybrid, and in the most unlikely of places: a huge luxury saloon

THE BAD: Boot size suffers, and ride quality isn't perfect

THE UGLY: It's a pity this approach wasn't applied to the new C63

THE ONE TO BUY: Two versions, both at £189k, one with more black trim

BMW M5

THE GOOD: Very rapid, ridiculously agile and refreshingly low on emissions; a clever reboot in PHEV form

THE BAD: Lots of modes, and an odd amount of wind noise

THE UGLY: Heavy and expensive, so it's not that clever

THE ONE TO BUY: £113,405 for the Touring; £2k less for the saloon

ALFA GIULIA QUADRIFOGLIO

THE GOOD: Charisma in spades, fantastic agility and almost as good as an M3 to drive

THE BAD: Emphasis on *almost* as good as an M3 to drive

THE UGLY: Flaky interior quality; infotainment still lags behind the best

THE ONE TO BUY: There's just the one, wonderful, model from £79,495/£699pcm

PORSCHE PANAMERA

THE GOOD: New version builds on success of the very fine model it replaces

THE BAD: Barely a saloon – four-up is okay, but forget five

THE UGLY: Estate version is no longer available, even though it was the best looker

THE ONE TO BUY: £79,500 gets the base model; Turbo E-Hybrid at £141k now tops the range

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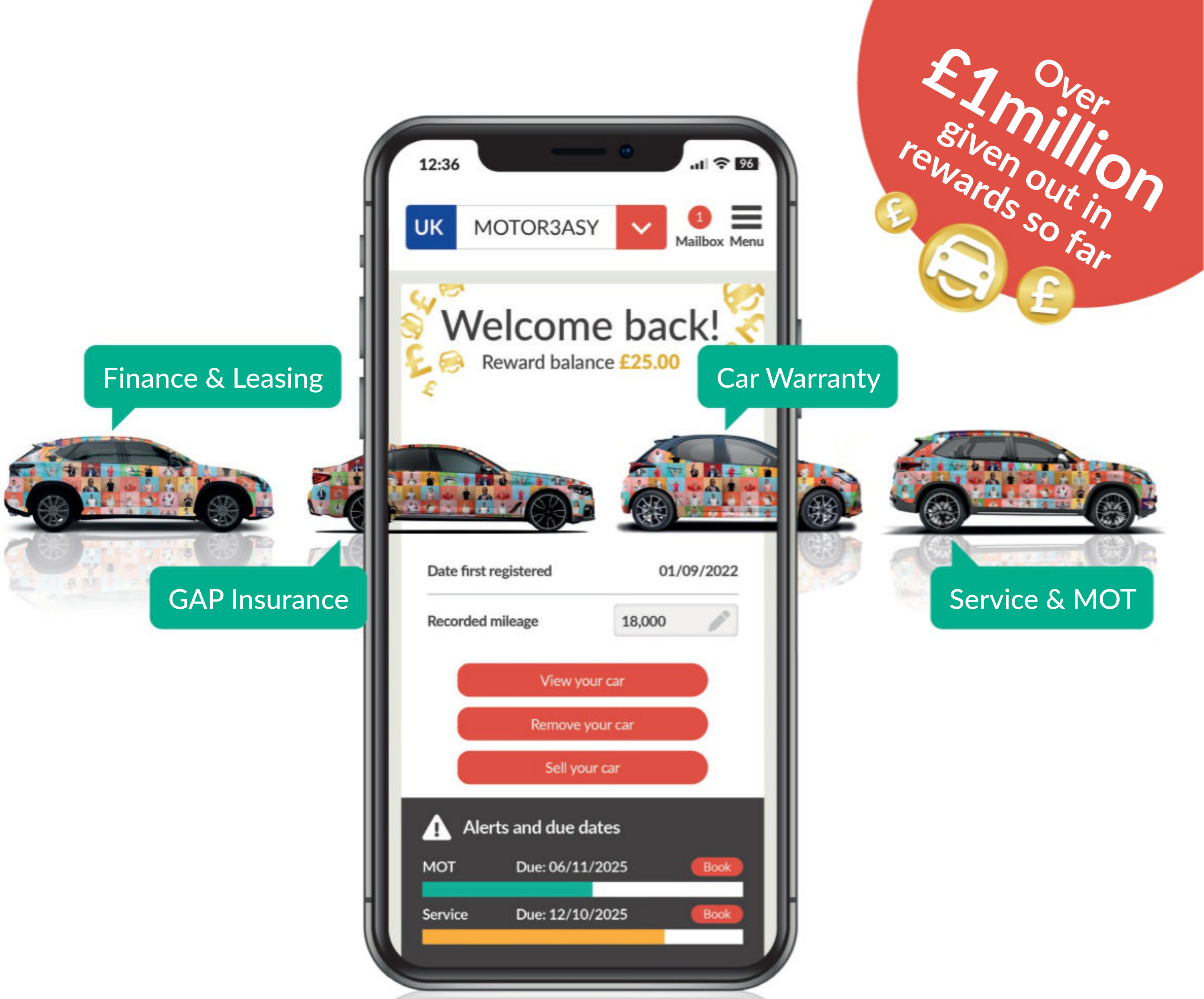
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NEW TAVASCAN
100% ELECTRIC
CUPRA
CUP 12A

For the daring few. The new CUPRA Tavascan is here to redefine performance with its bold, unconventional design and state-of-the-art technology. Our first all-electric SUV coupé, crafted for those who defy the ordinary.

Maximum range on a full charge for a CUPRA Tavascan is 298.9 - 353.6 miles (official test WLTP figures) depending on the trim. Official fuel consumption for the Tavascan mpg (litres/100km) combined: N/A. Combined CO_2 emissions: 0g/km. Test data obtained under standardised conditions after the battery had been fully charged (to 100%). The Tavascan is a battery electric vehicle requiring mains electricity for charging. Figures shown are for comparability purposes and may vary by trim. Only compare fuel consumption, CO_2 and electric range figures with other vehicles tested to the same technical procedures. These figures may not reflect real life driving results, which will depend upon a number of factors including the starting charge of the battery, accessories fitted (post-registration), variations in weather, driving styles, route conditions, speed, vehicle and battery age and vehicle load. Zero emissions while driving. Data correct at December 2024.